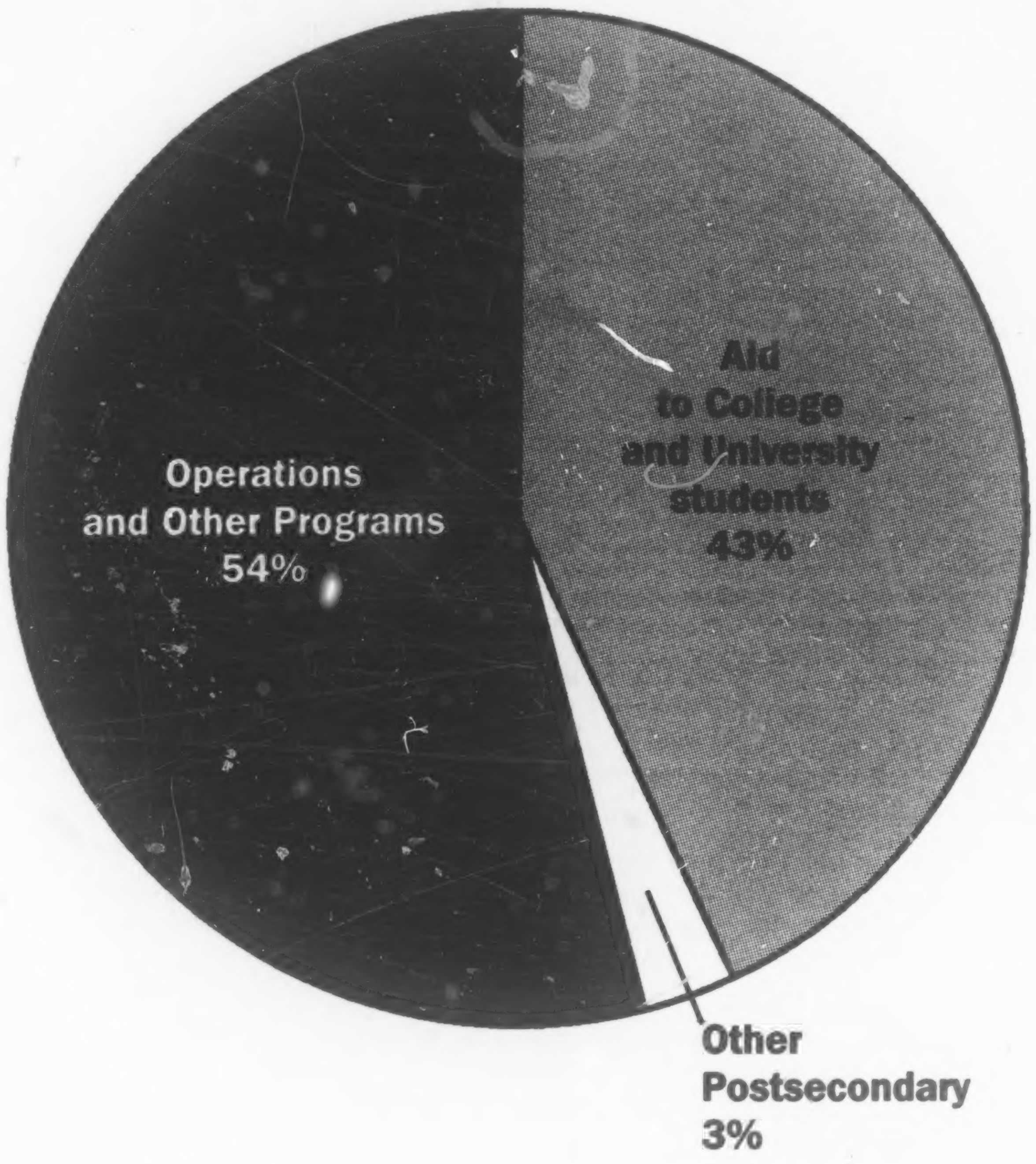
THE BUSH BUDGET

At a Glance

COMPARED WITH FISCAL 1991

EDUCATION DEPARTMENT:	
Pell Grants	+7%
Supplemental Grants	–33%
College Work-Study	–33%
Stafford Student Loans	+39%
Aid to black colleges	No change
International education	No change
Education research	+15%
State student aid	–100%
Office for Civil Rights	+16%
Vocational education	+4%
FIPSE	No change

OTHER AGENCIES:	
NIH	+6%
AIDS research	+3%
NSF	+18%
Cooperative extension	+3%
DOD basic research	–10%
"Star Wars" research	+80%
Superconducting Supercollider	+120%
NASA research and development	+19%
National Endowment for the Humanities	+5%
National Endowment for the Arts	No change
National Archives	+10%
USIA educational and cultural exchanges	+5%
Non-profit postal subsidies	–61%



Where Education Department Dollars Go

In the Department of Education

	Fiscal 1990 actual	Fiscal 1991 estimate	Fiscal 1992 request
Student assistance			
Pell Grants	$4,804,478,000	$5,374,282,000	$5,775,121,000
Supplemental Grants	458,650,000	520,155,000	346,945,000
College Work-Study	601,765,000	594,689,000	396,615,000
Income-contingent loans	9,863,000	4,880,000	10,000,000
State Student Incentive Grants	59,181,000	63,531,000	0
Perkins Loans	148,309,000	156,144,000	15,000,000
Stafford Student Loans	4,376,027,000	4,244,489,000	5,892,632,000
Paul Douglas Teacher Scholarships	14,922,000	14,639,000	14,639,000
Graduate support			
Patricia Roberts Harris graduate fellowships	16,034,000	17,566,000	0*
Robert C. Byrd honors scholarships	8,627,000	9,271,000	9,271,000
Jacob K. Javits fellowships	7,896,000	7,807,000	0*
Patricia Roberts Harris public-service fellowships	3,277,000	3,198,000	0*
Minority participation graduate fellowships	3,547,000	5,953,000	0*
Areas of National Need fellowships	15,793,000	24,885,000	0*
Institutional assistance			
Developing institutions			
Aid for historically black colleges	95,366,000	99,542,000	99,542,000
Endowment challenge grants	17,893,000	17,462,000	7,462,000
Institutional support	82,911,000	87,831,000	87,831,000
Cooperative education	13,445,000	13,175,000	13,175,000
Facilities			
College-housing and academic-facilities loans	35,129,000	37,726,000	3,598,000
Interest-subsidy grants	22,449,000	20,396,000	19,412,000
International education	30,250,000	34,525,000	34,525,000
Law School Clinical Experience	4,935,000	5,855,000	0
Veterans' Education Outreach	2,801,000	2,733,000	0
Bilingual education			
Bilingual vocational training	2,959,000	2,888,000	2,888,000
Training grants	31,913,000	36,066,000	36,066,000

Proposed Spending on Colleges, Their Students, and Scientific Research

	Fiscal 1990 actual	Fiscal 1991 estimate	Fiscal 1992 request
Library resources			
Research libraries	$5,738,000	$5,855,000	$0
Training and demonstration	285,000	325,000	0
College-library technology grants	3,732,000	3,904,000	0
Aid to disadvantaged			
College-aid migrant programs	1,720,000	1,952,000	2,034,000
Legal Training for the Disadvantaged	2,468,000	2,928,000	0
Minority Institutions Science Improvement	5,416,000	5,855,000	6,101,000
Programs for disadvantaged students	248,330,000	343,615,000	395,075,000
Education research and statistics			
Education research	55,502,000	64,714,000	74,296,000
Education statistics	22,655,000	44,313,000	51,974,000
Education for the handicapped			
National Institute on Disability and Rehabilitation Research	54,318,000	58,924,000	0
Research and development	19,825,000	20,174,000	20,174,000
Personnel development	63,706,000	69,289,000	69,289,000
Rehabilitation training	31,110,000	33,353,000	0
Postsecondary programs	6,510,000	8,559,000	8,559,000
Miscellaneous			
Adult education	192,795,000	238,828,000	250,727,000
Vocational education grants	850,734,000	856,503,000	890,656,000
Teacher training	151,515,000	230,171,000	260,704,000
Office for Civil Rights	44,572,000	48,405,000	56,000,000
Drug-abuse education, prevention for college students	19,200,000	19,100,000	19,500,000
Fund for the Improvement of Postsecondary Education	11,702,000	14,639,000	14,639,000
Student Literacy Corps	5,042,000	5,367,000	0
Women's educational equity	2,098,000	1,995,000	500,000
School, College, and University Partnerships	2,961,000	3,904,000	0*

In Other Federal Agencies

	Fiscal 1990 actual	Fiscal 1991 estimate	Fiscal 1992 request
Scientific research			
National Institutes of Health			
Cancer Institute	$1,682,700,000	$1,720,426,000	$1,815,872,000
Heart, Lung, and Blood Institute	1,072,793,000	1,129,992,000	1,212,924,000
Institute of Dental Research	136,397,000	151,192,000	161,939,000
Institute of Diabetes, Digestive, and Kidney Diseases	582,891,000	618,792,000	662,557,000
Institute of Neurological and Communicative Disorders and Stroke	490,268,000	544,843,000	586,455,000
Institute of Allergy and Infectious Diseases	843,624,000	919,608,000	991,254,000
Institute of General Medical Sciences	714,503,000	765,510,000	838,680,000
Institute of Child Health and Human Development	444,450,000	481,360,000	522,988,000
Eye Institute	236,742,000	253,488,000	272,407,000
Institute of Environmental Health Sciences	269,961,000	286,817,000	300,500,000
Institute on Aging	240,091,000	325,252,000	350,058,000
Institute of Arthritis, Musculoskeletal, and Skin Diseases	170,337,000	195,347,000	206,897,000
Research Resources	371,652,000	337,595,000	323,350,000
Center for Nursing Research	36,058,000	43,242,000	47,267,000
Institute of Deafness and Other Communication Disorders	117,649,000	134,935,000	135,435,000
Center for Human-Genome Research	59,538,000	87,522,000	110,597,000
International Center	16,775,000	18,969,000	21,422,000
Library of Medicine	98,111,000	105,046,000	114,738,000
Total, N.I.H.	7,576,537,000	8,277,174,000	8,775,386,000
AIDS research, education, and prevention	1,590,000,000	1,885,000,000	1,950,000,000
National Science Foundation			
Renovation of research facilities	19,690,00	20,478,000	0
Research	1,554,868,000	1,694,200,000	1,963,500,000
Science and engineering education	220,678,000	322,350,000	390,000,000
Antarctic program	79,729,000	75,000,000	75,000,000
Research instruments	0	0	50,000,000
Total, National Science Foundation	2,122,588,000	2,316,028,000	2,722,000,000

	Fiscal 1990 actual	Fiscal 1991 estimate	Fiscal 1992 request
Department of Agriculture			
Cooperative research			
Hatch Act support	$155,100,000	$162,300,000	$168,300,000
Payments to black colleges	30,400,000	34,600,000	38,300,000
Special research grants	56,300,000	62,400,000	26,700,000
Competitive research grants	42,500,000	73,000,000	125,000,000
Animal-health research	5,400,000	5,600,000	0
Total cooperative research	385,600,000	454,200,000	409,200,000
Extension service	369,200,000	398,500,000	410,800,000
Department of Defense			
Basic research	936,145,000	1,125,379,000	1,009,816,000
University Research Initiative	94,800,000	230,711,000	87,373,000
Strategic Defense Initiative	3,571,211,000	2,862,495,000	5,150,574,000
Department of Energy			
General science	1,084,219,000	1,148,732,000	1,548,939,000
Superconducting Supercollider	192,735,000	242,900,000	533,700,000
Basic energy sciences	564,000,000	711,800,000	714,700,000
Environmental Protection Agency			
Research and development	234,291,000	259,900,000	318,000,000
National Aeronautics and Space Administration			
Research and development	5,895,197,000	6,563,437,000	7,812,275,000
Space station	1,750,000,000	1,900,000,000	2,029,000,000
Health research and training			
Alcohol, Drug Abuse, and Mental Health Administration			
Research	855,000,000	982,000,000	1,065,000,000
Centers for Disease Control			
Occupational safety, health research and training	84,659,000	96,980,000	96,980,000
Health professions			
Health-professions education			
Exceptional-need scholarships	6,685,000	9,759,000	10,400,000
Aid to disadvantaged students	26,965,000	30,817,000	32,841,000
Primary-care and family-medicine training	65,841,000	69,050,000	0
Nurse training	56,636,000	58,524,000	4,160,000
Total, Health-professions education	215,000,000	261,000,000	88,000,000
Health Service Corps	51,000,000	91,000,000	96,000,000
National Health Service Corps scholarships and loan repayment program	11,382,000	48,795,000	53,795,000
Medical-facilities guarantees and loans	21,000,000	20,000,000	19,000,000
Area health-education centers	18,125,000	19,237,0[illegible]	0
Arts and humanities			
National Endowment for the Humanities			
Education programs	15,974,000	17,806,000	18,900,000
Fellowship programs	15,343,000	16,215,000	17,600,000
General programs	23,074,000	23,177,000	23,900,000
Research programs	16,763,000	18,503,000	19,900,000
State programs	25,637,000	26,859,000	26,900,000
Office of Preservation	17,453,000	22,581,000	20,800,000
Challenge grants	14,495,000	15,071,000	16,050,000
Treasury matching grants	11,832,000	11,937,000	14,400,000
Total National Endowment for the Humanities	156,910,000	170,004,000	178,200,000
National Endowment for the Arts	171,255,000	174,083,000	174,083,000
Institute of Museum Services	22,675,000	25,864,000	25,970,000
National Archives & Records Administration	124,840,000	138,219,000	152,143,000
Civil rights			
Commission on Civil Rights	5,707,000	7,075,000	10,780,000
Equal Employment Opportunity Commission	185,170,000	198,300,000	210,271,000
Miscellaneous			
Corporation for Public Broadcasting	229,391,000	298,870,000	327,2[illegible],000
Veterans' educational benefits	456,928,000	543,326,000	652,922,000
Peace Corps	169,675,000	190,589,000	205,152,000
U.S. Information Agency			
Educational and cultural exchanges	163,557,000	172,378,000	181,727,000
Postal subsidies for non-profit organizations	453,425,000	472,592,000	182,778,000
Small Business Development Centers	49,300,000	55,700,000	30,000,000

* President Bush proposed that these programs receive no money, but he also proposed the creation of new programs to encompass their purposes.

Budget Backs 8% Increase for Basic Science, With Big Share to Individual Researchers

Continued From Page A19

chief adviser for science and technology, said at a press briefing on the budget last week that the President's plan represented a strong, long-term investment in research and development, including "a particular focus" on basic research.

That focus, he said, recognized "the many essential contributions of basic research, especially at universities."

Following are details about the proposals for specific agencies and initiatives.

National Science Foundation. The N.S.F. budget would grow by about $406-million, for a new total of about $2.72-billion. The largest part of the increase—about $150-million—would be devoted to expanding research in several areas the government has designated as high priorities, including high-performance computing and communications, and the synthesizing and processing of materials. Much of the research would be conducted by individual scientists or small groups of scientists who receive N.S.F. grants.

The agency is also asking for $50-million to start a new program to help colleges and universities develop and purchase state-of-the-art laboratory equipment.

National Institutes of Health. Biomedical researchers disagreed over the Administration's proposals for N.I.H. Some said the budget reflected an encouraging commitment to basic research on the part of the White House. Others attacked the Administration, saying that the budget proposal had failed to meet a Congressional mandate for increasing the number of individual grants and that it would cut costs at the expense of scientific quality.

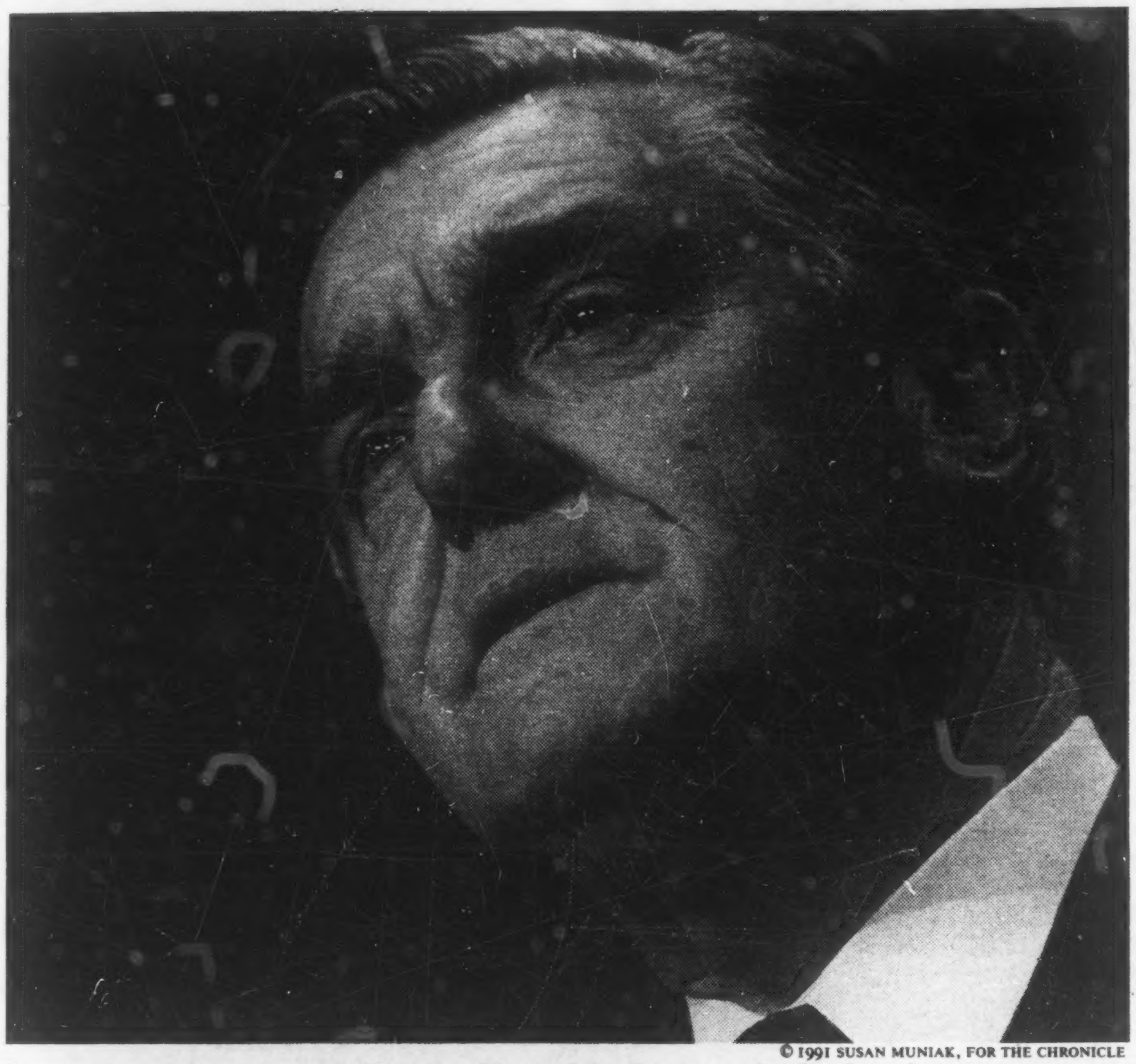
For N.I.H., the budget called for an overall increase from $8.2-billion to $8.8-billion. The increase for research-project grants would be about 9 per cent, from $4.5-billion to $4.9-billion. The budget would allow N.I.H. to support 5,785 new grants in 1992—the same number as in 1991. N.I.H. supported 4,750 in 1990. Last year Congress ordered the institutes to revamp their financial-management plan so they could support 6,000 new grants a year. The new plan is still being revised.

Said Leon E. Rosenberg, dean of the Yale University medical school: "I am encouraged that the President's budget requests a significantly greater increment for biomedical research than had been the case in recent years. I remain convinced, however, that the opportunities to improve health through research are much greater than the requested funds will permit."

Other researchers said this year's budget request marked a change from the pattern of the last several years, in which the White House asked for minimal increases for the N.I.H. and Congress approved more significant raises.

"Out of the starting blocks, we're ever so much better off than last year," said Thomas D. Pollard, director of the department of cell biology and anatomy at the Johns Hopkins University medical school.

Some researchers and lobbyists said, though, that because the Administration had still not provided enough money to finance the larger number of grants adequately, it was setting the stage for continuing instability in the number and level of grants. The Ad Hoc Group for Medical Research Funding, a coalition of about 150 research organizations, said in a statement: "There is a serious shortfall between the proposal to award additional research grants and the dollars provided to fund them. Attempts to buy research 'on the cheap' can only impede scientific progress."



© 1991 SUSAN MUNIAK, FOR THE CHRONICLE

Energy Secretary James D. Watkins: Most of the increase for basic science is a 120-per-cent rise in support for the Superconducting Supercollider.

High-performance computing and communications. Eight agencies are participating in a coordinated effort to expand research and development in all advanced areas of computing and networking. Overall, federal spending for the effort would go up by about 30.5 per cent, to about $638-million.

The effort is intended to develop the hardware, software, and networks, as well as the training, that the next generation of supercomputing systems will require.

About $265-million would be devoted to developing affordable software that will allow much faster computations for basic problems in science and engineering.

About $157-million would be spent on

Teaching Hospitals Would Lose Nearly $1.2-Billion Under Administration's Budget Plan

By SCOTT JASCHIK

WASHINGTON

Teaching hospitals would lose nearly $1.2-billion next year under the budget that President Bush sent to Congress last week.

Officials of medical schools say their institutions would be devastated by the cuts, which would reduce Medicare payments to hospitals. They also say they are worried by another Administration proposal that would change the way federal loans are provided to their students.

It was unclear last week how Congress would respond to the proposed Medicare cuts. In the past, lawmakers have rejected similar ideas. Key lawmakers have already pledged to fight the proposal.

But this year's budget deliberations will be governed by a law, adopted last year, that requires any increases in domestic spending programs to be matched by reductions in other domestic programs. A similar rule applies to increases in military programs. Many political observers say the proposal for teaching hospitals may go through this year because Congress is unlikely to cut other domestic programs enough to find $1-billion for the hospitals.

"This may be the only pot of money to take a big chunk from," says Mary Beth Bresch, legislative analyst for the American Association of Medical Colleges.

More than $1-billion would be cut by changing the formula the government uses to calculate Medicare payments to teaching hospitals. The payments—which total billions of dollars a year—are intended to help the hospitals meet the extra expenses they face in training new doctors, providing care to many indigent patients, and offering a wide variety of medical programs.

Administration officials say the payments must be cut because they cost Medicare too much. The officials also say the formula is too generous.

> **"Teaching hospitals need to maintain a certain patient base to teach, but they also cannot endanger the functioning of an English or history department."**

Medical-school officials, however, say their institutions cannot afford to lose $1-billion next year. Says Adele R. Amodeo, coordinator of health-legislation review for the University of California system: "It's very frightening to watch the operating margins shrink and shrink."

The university system operates five acute-care and two psychiatric hospitals. One of the hospitals, at Irvine, is bankrupt, Ms. Amodeo says, adding that cuts of the magnitude proposed by the President could put other hospitals in the system in the red.

She adds: "Teaching hospitals need to maintain a certain patient base to teach, but they also cannot endanger the functioning of an English or history department to make up for the difference in what the government provides."

Teaching hospitals would also lose money because of a proposed change in the way Medicare reimburses them for the services provided by medical residents.

In the past, the reimbursement formula did not distinguish between residents in primary-care fields and those in specialties. This year, however, the budget proposes changing the formula to give teaching hospitals less money if too many of their residents are in specialties.

Ms. Bresch of the American Association of Medical Colleges says the proposal would hurt teaching hospitals and do nothing about the need for more primary-care residents. She says that hospitals are able to fill only 85 per cent of the primary-care residencies they offer now, and that the solution is attracting more medical students, not changing hospital behavior.

The Bush Administration projects that changing the reimbursements would save the government $140-million.

Another proposal, which would affect medical as well as other health-professions schools, would end the Health Education Assistance Loans program by merging it into the Health Professions Student Loans program. The former is open to all students, regardless of financial need. The latter is available only to needy students.

Medical Students Concerned

James O. Mason, Assistant Secretary of Health and Human Services for health, says the merger is part of an Administration commitment to put limited funds in programs that serve disadvantaged people. Administration officials also say that, if the proposed change takes effect, chiropractic and podiatry students will be excluded from the loan program because they have had high loan-default rates.

Medical-student groups say they are concerned that the proposal would deny funds to students from middle-class families—students who may not be poor but may still need government loans to finance their medical education.

Chiropractic-school officials also vow to fight the plan. Kenneth W. Padgett, president of the New York Chiropractic College, says any change in the programs should be based on the default rates of particular schools, rather than affecting all of a given profession's schools. "You just shouldn't discriminate against professions," he said. ■

developing new hardware for future generations of computers and for easier use of current models. An additional $92-million would be spent on a National Research and Education Network that would improve and link existing federally supported research networks so that government agencies, higher-education institutions, industries, small businesses, and schools would be able to tap into a wide range of scientific resources.

Department of Defense. As part of the 10-per-cent cut in its budget for basic research, the Defense Department has proposed reducing funds for the University Research Initiative by nearly 63 per cent. The program, which supports multidisciplinary research and training at colleges and universities, would be cut from about $230.7-million to about $87.4-million.

The Pentagon is also asking for about $5.15-billion for the Strategic Defense Initiative. That would be an increase of about 80 per cent for the program, popularly referred to as "Star Wars."

Department of Energy. Basic-science programs at the Energy Department would receive a major boost next year, rising nearly 16 per cent to $2.67-billion. Energy Secretary James D. Watkins said at a press briefing that most of the increase was the result of a 120-per-cent jump in support for the Superconducting Supercollider, which would receive $533.7-million next year.

Deputy Energy Secretary W. Henson Moore announced at a separate meeting with reporters that several teams of accounting experts had agreed that the total cost of building the supercollider would not exceed $8.25-billion.

He warned that if Congress failed to provide enough money to complete the 53-mile, oval-shaped particle collider by 1999, the cost of the project could go up. The supercollider is to be built south of Dallas.

"Time is money," he said, noting that each year of delay would add another $400-million to the project's overall cost. Mr. Moore added that because of the need to more than double the project's annual budget now, "this year in Congress is going to be our biggest hurdle."

"This will represent a major commitment from Congress that they too want to build this," he said.

Funds for other energy-research programs would receive only modest increases next year under the Administration's request. Basic-energy-sciences research, for example, would rise less than 1 per cent, to $715-million, and high-energy-physics programs would grow 13 per cent, to $666-million.

Mr. Watkins said he was concerned that energy-research programs, particularly the supercollider, not be affected by lawmaker's efforts to redirect funds away from research and toward construction of "pork barrel" facilities in their districts.

Mr. Watkins said he was particularly angered by Congress's decision to cut $50-million from nuclear-fusion research in the current year's budget to pay for some of the projects. "We now have a stripped-back fusion program, bare bones, barely hanging in there," he said.

Congressional reaction to the budget plan for the supercollider was mixed. Members of Texas's powerful Congressional delegation have pledged to fight for it. But some lawmakers said they would seek to block support for the project. Rep. Sherwood L. Boehlert, a New York Republican, called the cost estimates for the collider "unrealistically low" and said: "The President's budget provides ample evidence that the Superconducting Supercollider should be delayed or canceled."

National Aeronautics and Space Administration. NASA would receive a 13-per-cent increase in its overall budget—set for $15.7-billion in 1992—and basic-science research would also receive healthy increases.

Richard H. Truly, NASA's Administrator, told reporters that space-science research would be "a top priority" at his agency next year, rising 21 per cent to $2.93-billion. That includes an increase of nearly 17 per cent for physics and astronomy programs, to $1.14-billion; a boost of 32 per cent for life-sciences research, to $183-million; and a rise of 37 per cent for planetary exploration, to $627-million.

Funds for research and development for the space station *Freedom*, meanwhile, would grow by 7 per cent, to $2-billion.

Agriculture research. Federal support for the Cooperative State Research Service, which sponsors agriculture research throughout the country, would drop 9.9 per cent—to $409.2-million—under President Bush's proposed budget. However, the service's competitive-grants program would increase by 71.2 per cent, to $125-million.

The cuts would come from specialized programs created by Congress in recent years in such fields aquaculture, as well as from earmarks for specific campuses that lawmakers have designated in annual appropriations bills.

College officials said they were pleased with the increase in the competitive program because they have been pushing in recent years for more money to be awarded competitively. Historically, most agriculture-research money has been distributed through population-based formulas.

The Agriculture Department is also moving to redress the major complaint that colleges have had about the competitive program: a cap on the additional amount that a college can charge the government for the overhead costs associated with a research grant. Most college officials said the current limit, 14 per cent of the amount of the grant, was far too low, but key members of Congress said it was needed to insure that limited federal funds went to support research.

Charles E. Hess, Assistant Secretary of Agriculture for science and education, said last week that he would support efforts to remove the cap.

Global-change research. Support for research related to global climate change would increase by 24 per cent under President Bush's budget, to $1.18-billion. The research is conducted by nine federal agencies. Under the proposal, the top priority for the research supported by the agencies in the next year would be to determine whether, and to what extent, human activities change the global climate system.

Science and mathematics education. The Administration's 1992 budget includes $1.94-billion—or 13 per cent more than the current year's—for various mathematics and science-education programs in kindergarten through graduate school. That number includes $660-million for programs at the pre-college level, $477-million for undergraduate programs, and $803-million for graduate programs. Although graduate programs would continue to receive the most money, they would grow by only 2.4 per cent. Pre-college programs would grow by 28.4 per cent and undergraduate programs would go up 14.3 per cent.

Scott Jaschik and Kim A. McDonald contributed to this article.

Scientists Puzzled by Bush Plan for Research Facilities

By COLLEEN CORDES

WASHINGTON

Higher-education officials are puzzled by President Bush's 1992 budget plans for improving academic research facilities and equipment.

On one hand, the Administration proposed a new $25-million program to renovate facilities for agricultural research. And the President called for a new $50-million program at the National Science Foundation to help colleges develop and acquire state-of-the-art research equipment.

On the other hand, the Administration proposed no money whatsoever for the N.S.F.'s two-year-old program for renovating academic research facilities of all kinds. Congress appropriated $20-million for the program this year.

Moreover, in its official budget documents the Administration appeared to argue that universities' need for improved academic research facilities was not the federal government's problem.

"Special programs for facilities repair and renovation are not warranted because the federal government directly supports only a small proportion (less than 10 per cent) of this activity," the Administration's budget book said.

Statement Is Called 'Ludicrous'

Patricia S. Warren, who directs the Higher Education Colloquium on Science Facilities, said the statement was "almost ludicrous."

"It's like saying, 'We haven't been doing what we should be doing, therefore we shouldn't do it,' " she said.

Ms. Warren's organization is a bipartisan group of lawmakers and higher-education officials who want the federal government to provide coordination and money to improve the nation's science facilities.

Some scientists said the Administration had no choice but to avoid spending N.S.F. money on facilities next year.

"Renovation is needed and facilities are important—and they're disintegrating all over the country," said Robert L. Park, who directs the Washington office of the American Physical Society. "At the same time, it's not the highest priority. There are just too many good scientists out there who can't get the money to do their projects."

D. Allan Bromley, the President's chief adviser for science and technology, added to last week's confusion by saying at a budget briefing that he still believed the state of academic research facilities was a serious problem that the government should help solve. He said the $75-million in new programs for scientific equipment and agricultural-research facilities did not "begin to address the scope of the problem that's out there."

> **"Programs for facilities repair and renovation are not warranted because the federal government directly supports only a small proportion of this activity."**

Because of other priorities, Mr. Bromley said, the Administration was not able to propose a major plan to solve the problem in fiscal 1992. But he said that such an initiative remained "a high priority."

Some academic officials said the Administration's budget document made light of the problem. After noting that universities must certify to the government that their facilities are adequate to conduct the research for which they receive grants, the document added that the reported deterioration of facilities "has not had an apparent effect on the ability of universities to accept federal research funds."

Budget Cites Overhead Costs

The budget document also pointed to the large amounts of money universities receive for the overhead costs of research as representing a "considerable and continuing investment in academic research facilities."

Federal regulations allow institutions to charge the government for overhead based on the depreciation, operation, and maintenance of research buildings, and the rules also allow reimbursements for the interest that universities pay when they borrow money to build new research facilities. Mr. Bromley said the Administration would re-examine those regulations this year.

University officials said the Administration's ambivalence about providing money for facilities was matched in academe. They said many researchers would probably oppose any attempt to award more money to N.S.F. facilities program if the increase were to come at the expense of research grants.

Added Mr. Park: "The bench scientists are going to say, 'Look, I'll do it in my garage if I have to; just give me the money to do my research.' "

A compromise may be attempted, Ms. Warren said, under which researchers and higher-education groups would agree to lobby Congress to spend some of the $50-million proposed equipment on the N.S.F. facilities program instead. Short of some action, she added, the situation can only get worse. "That's why we've got a $12-billion problem," she contended, "because it's always deferred." ■

Case Western Professors Say Budget Debate in Congress Directly Affects Their Lives

Continued From Page A19

worries about the government's emphasis on practicality. “Every field needs a mix of knowledge generation and problem solving,” she says.

Even those who do obtain grants have problems. It may take a year to write a proposal and another for funds to arrive, Ms. Brennan says. Hence, when a grant is awarded, it is likely to be based on financial estimates that have been eroded by two years of inflation. Then, 10 to 15 per cent may be cut from the award, based on how much money the federal agency has received that year.

That leaves people scrambling to purchase the equipment they had planned for, or to hire the additional research assistant. “To live in this era of funding, you have to keep turning up rocks to see if there is any money under them,” Ms. Brennan says.

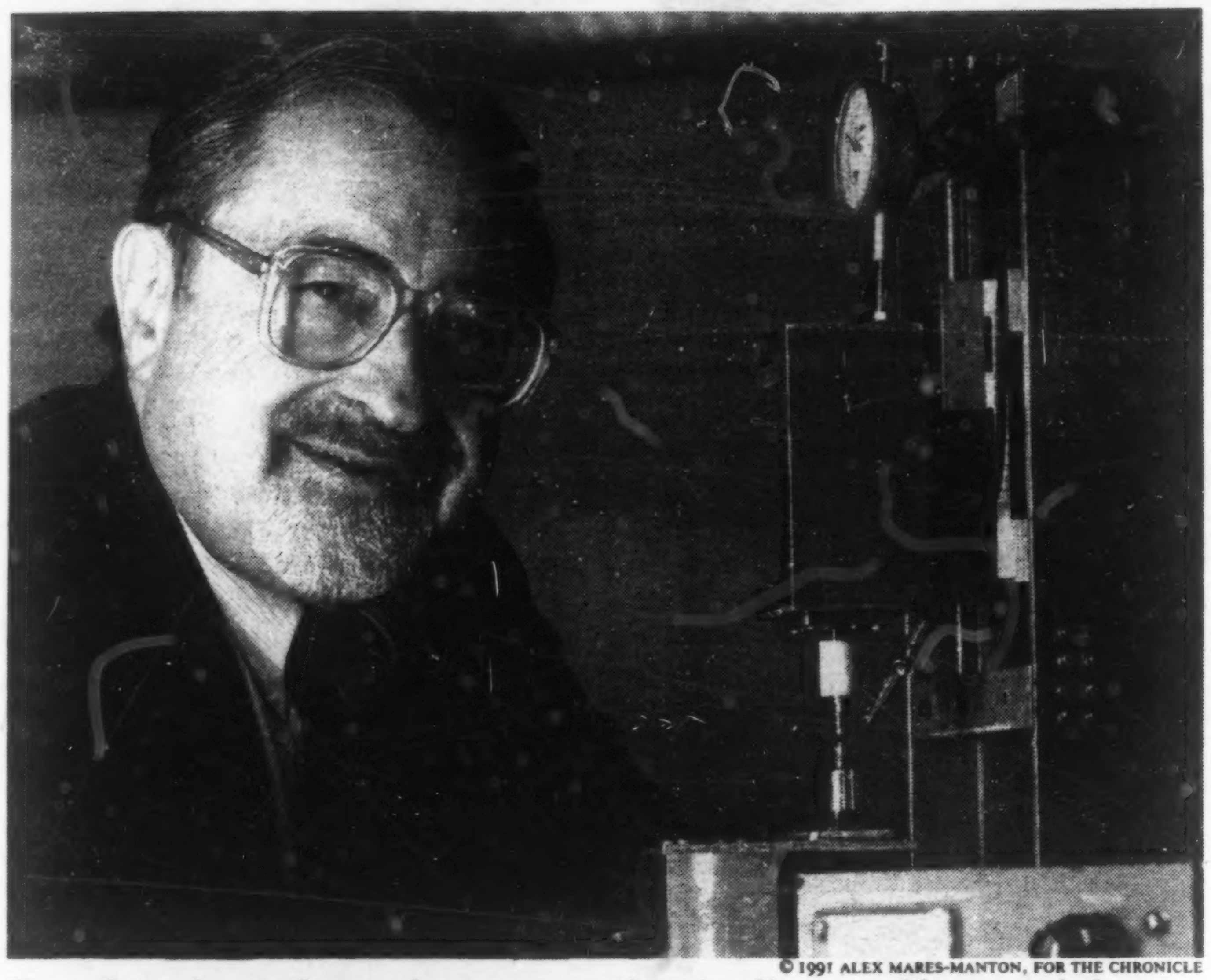
$23-Million Study on Microgravity

Some faculty members still pull in major grants, but even they have mixed feelings about the federal budget policies. One is Simon Ostrach, a professor of mechanical and aerospace engineering who is directing a $23-million study on the effects of microgravity on surface tension, crystal growth, and combustion. The National Aeronautics and Space Administration is supporting the work, which will culminate in experiments to be conducted on a space shuttle next year.

Mr. Ostrach came to the university in 1960 and was told by NASA and the university to build a top department. He received annual grants of $100,000 from NASA, with few real limits on how the money could be spent. He then hired top young scholars. “I could say to them, ‘Don't worry about hustling money,’ ” Mr. Ostrach recalls, adding that he could never tell a young faculty member the same thing today.

Now, he says, faculty members not only must spend a great deal of time applying for grants, but they also must spend time creating “centers” to impress federal agencies. Some agencies, especially the National Science Foundation, have designated more and more money in recent years to support such centers, which are supposed to encourage interdisciplinary research. The idea is that scholars gain from contact outside of their disciplines.

Mr. Ostrach says the focus on centers is one reason he “completely ignores” the N.S.F. He says the centers become bureaucratic and their officials spend too much time in meetings—all to satisfy a federal demand for cooperation. Such policies limit the federal programs Mr. Ostrach will apply to, but he adds: “At least every buck I get is a buck for research.”



© 1991 ALEX MARES-MANTON, FOR THE CHRONICLE

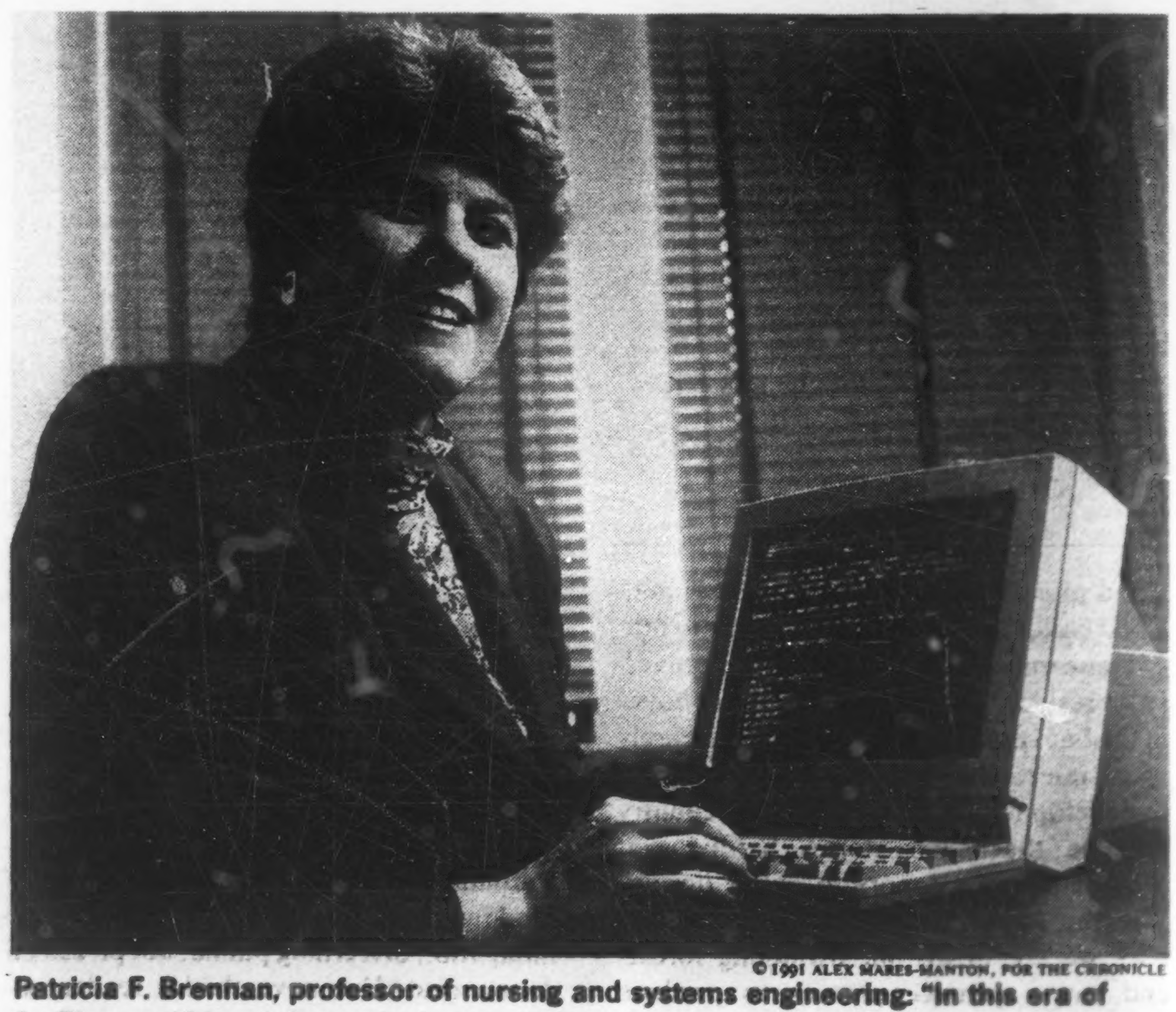
Simon Ostrach, a professor of aerospace engineering: He once told young scholars, “Don't worry about hustling money.” He could never tell them the same thing today.

The federal emphasis on centers draws different reactions from others here. Just last month, university officials proudly announced that Case Western, Kent State University, and the University of Akron had won a $20-million N.S.F. grant to create the Science and Technology Research Center in Polymer Liquid Crystals.

In many cases, faculty members here say they rely on existing strengths of the university and of their own research to win federal funds. But their success with proven strategies can make people nervous about submitting grant applications that might be viewed as risky.

“The best grant now is a grant for work you are positive you can do, and a grant for work you have almost done already.”

Neil Cherniak, dean of the medical school, says researchers are unlikely to seek support for unconventional work these days. “The best grant now is a grant for work you are positive you can do, and a grant for work you have almost done already,” he says.



© 1991 ALEX MARES-MANTON, FOR THE CHRONICLE

Patricia F. Brennan, professor of nursing and systems engineering: “In this era of funding, you have to keep turning up rocks to see if there is any money under them.”

Dr. Cherniak says it's not necessarily bad that competition for federal money is so intense. Much good work, he says, is receiving support, both at Case Western and at other universities. But he says scientists' ability to do such work would be greatly enhanced if the federal government had a program to build or renovate research facilities.

In this year's federal budget, Case Western received a $10-million Congressional “earmark” for a new biomedical-science building. Officials say they wouldn't have sought the earmark—an action by Congress that by-passes merit review—if a merit-review program for biomedical facilities existed. They add that they must find a way to keep their buildings modern.

Dr. Cherniak also says that even with an increase in federal spending for science, anxiety about federal funds prompts faculty members—himself included—to spend too much of their time applying for grants. Dr. Cherniak is now applying for a renewal of a five-year grant from the National Institutes of Health that has brought $9-million to the university for studies of the causes of respiratory failure.

Fewer Professors in Political Science

Not all Case Western scholars feel pressured to win federal funds. Kenneth W. Grundy, a professor of political science, says his colleagues and those in many social sciences or humanities are not expected to support their research with federal dollars.

But even in a department without a large base of federal support, Mr. Grundy says, the Washington budget picture has an impact. “If the sciences are hurting, the whole university is hurting,” he says.

As the university has had to spend more on research facilities and on helping faculty members make up for federal-budget fluctuations, it has had less money for departments that can't turn to Washington, he says. The political-science department has shrunk from 11 full-time faculty members in the 1970's to 5 today.

Mr. Grundy also worries that the push for federal financial support hampers the university's efforts to improve the quality of teaching. Mr. Grundy says he once passed along student complaints about poor teaching in the sciences to a faculty member in a science department who replied: “I don't regard students as my clients. I regard federal funding agencies as my clients.”

Learning How to Win Grants

Amid many complaints about the scarcity of federal funds, some professors here say enough money is available if faculty members know how to get it. Joseph F. Fagan, III, a professor of psychology, teaches a for-credit course—in which many faculty members enroll—on winning federal grants. The final project is to complete an N.I.H. grant proposal.

Mr. Fagan says scholars need to adopt more-entrepreneurial attitudes about getting federal funds and to look for ways to demonstrate the value of their work to society. Then, he says, they will find that money is readily available.

In his case, Mr. Fagan received grants totaling nearly $1-million over a 25-year period for his work on infant memory. His research has led to a system that enables doctors to identify mentally retarded babies at a much earlier age than was previously possible, allowing parents and educators to start special programs for the babies immediately.

In the past two years, Mr. Fagan has started his own business to market his system to physicians and hospitals. Now the business is receiving support through the Small Business Administration and N.I.H.

Mr. Fagan says academics who are worried by the competition for federal funds must accept the fact that their numbers have grown much more quickly than have federal research budgets. When he started his career, there were 12 American psychologists studying infants, he says; today there are 1,500.

“The competition has increased, but most good people get funded somehow,” Mr. Fagan says. “It's just that what may have been good enough to get federal funds 10 years ago may not be good enough now.” ■

At Appalachian State U., Federal Student-Aid Funds Help Open Doors to Thousands

Continued From Page A19

showed Appalachian had a default rate of just 3.3 per cent.

Ms. Braxton says she worries more about the number of hours Appalachian's students are working to avoid having to take out larger loans. "When you overdo one end of the scale, something is going to suffer, and nine out of ten times it's the academics," she says.

John E. Thomas, Appalachian's chancellor, shares Ms. Braxton's concern. "If you work at a pizza place until 1 in the morning and you've got an 8 o'clock physics class, something's got to give," he says.

Sally F. Kuhl, a senior at Appalachian, says she has worked full time in the summers and as many as 30 hours a week during the school year to avoid having to borrow heavily. "I didn't want to graduate and have this huge debt hanging over my head," she says.

Having so many students working nights also makes it difficult for the university to schedule dormitory programs on topics that colleges have been criticized for overlooking, such as preventing AIDS and drug abuse, Mr. Thomas says. "You're limited when your audience is either tired or going 70 miles an hour with a pizza sign on top of their cars," he says.

Ms. Braxton says that when she looks forward to the government's 1992 fiscal year and its effect on the 1992-93 academic year, she is concerned that the Bush Administration's plan for focusing Pell Grants on the neediest students could cause many to take larger loans and to work more hours.

One senior has worked as many as 30 hours a week to avoid having to borrow heavily. "I didn't want to graduate and have this huge debt hanging over my head."

If the Bush plan is enacted, she anticipates that it would increase the overall amount of grant money flowing to Appalachian, but also that it would place greater financial burdens on many middle-income students who would lose their grants.

Problems for Trio Programs

For Chancellor Thomas, the proposed change in the distribution of Pell Grant dollars illustrates what he says is a serious problem with federal aid programs—their instability. Students, he says, "ought to come in and have some sort of stability in what we're offering them so we don't change rules in the middle of the stream."

The inability to forecast the amount of student aid that will be available two or three years down the road is also a serious problem for the Appalachian officials who administer the federal Trio programs for disadvantaged students. The campus received $181,001 this year for the Upward Bound program, which exposes high-school students to college life. Appalachian also received $100,000 for the Student Support Services program, which provides college students with tutoring and counseling.

Says Nancy G. Spann, director of Appalachian's Trio programs: "The biggest problem is that our students need to be secure that they have the money to stay in school at least two years."

Trio staff members would also like additional money for administering their programs. M. Wesley Waugh, coordinator of Upward Bound, says he is managing to serve 94 students in six high schools on a budget intended to serve 65.

'We Try to Appease Them'

High-school officials in the six rural counties served by the program want more of their pupils in Upward Bound, Mr. Waugh says. "We try to appease them and still be conscious of not trying to spread ourselves too thin," he says.

One way in which the program has managed to accommodate the 29 additional students, Mr. Waugh says, is to use Appalachian's education students as volunteer counselors who visit high schools to make students aware of college opportunities and the availability of financial aid.

Upward Bound also brings the high-school students to Appalachian's campus for a six-week college preparatory program during the summer, and takes them on field trips to other towns and cities. Mr. Waugh says he has held down the cost by making some of them camping trips.

In spite of the penny pinching, Upward Bound has been successful, Mr. Waugh says. Three-quarters of the students who were in the program in the 1989-90 school year are enrolled in college, and two-thirds of the program participants since 1984 are either in college or have a four-year degree, he says.

Cathia L. Tribby, coordinator of Student Support Services, says her program is also stretching available dollars and getting results. The $100,000 annual federal grant is supposed to provide counseling and tutoring for 125 students, but serves 134.

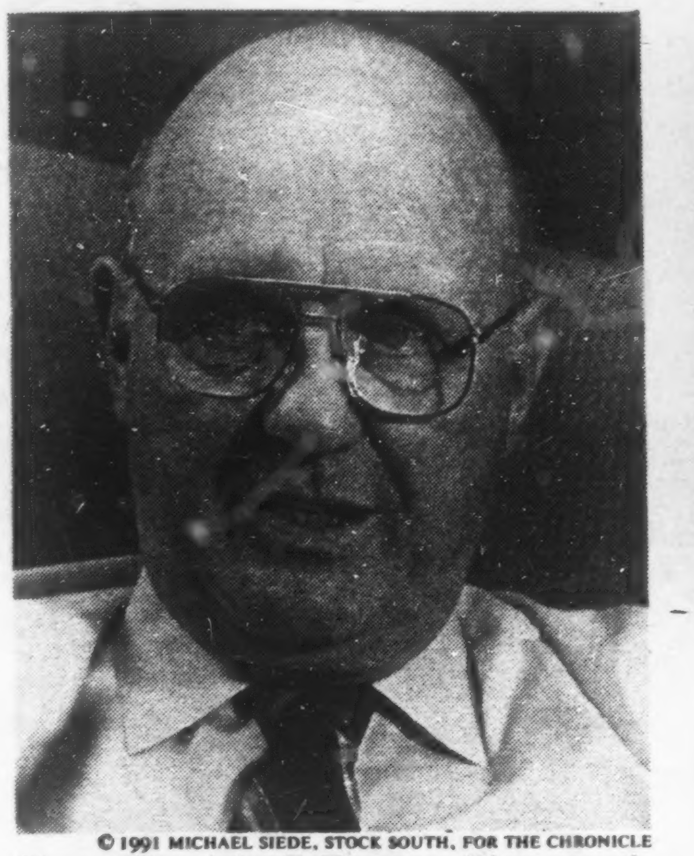
A Higher Percentage Graduate

Ms. Tribby anticipates that 64 per cent of the students who entered the program in 1986 will have graduated from Appalachian by the end of this academic year. Statistics for all Appalachian students, by comparison, show that after six years only 54 per cent had graduated or were still taking classes at the university.

While helping students get through college, the Student Support Services program also helps to diversify this predominantly white campus, Ms. Tribby says. More than 93 per cent of Appalachian's students are white, but 91 per cent of the students in the support-services program are black. For a university that has only a small minority-scholarship program and serves a predominantly white region, the availability of the support services can be the key to attracting blacks, she says.

Other federal programs are important in helping Appalachian increase its number of minority graduate students, says Gregory G. Reck, assistant dean for research and grants at the graduate school.

The Patricia Roberts Harris Fellowship program provided the university with $80,000 last year and $69,333 this year to serve black graduate students pursuing master's degrees in education. The Minority Participation in Graduate Education program supported a university program that enabled 10 undergraduate students to spend last summer doing research, working with faculty members, and preparing for their graduate-school aptitude tests.



© 1991 MICHAEL SIEDE, STOCK SOUTH, FOR THE CHRONICLE

Chancellor John E. Thomas: "If you work at a pizza place until 1 in the morning and you've got an 8 o'clock physics class, something's got to give."

© 1991 MICHAEL SIEDE, STOCK SOUTH, FOR THE CHRONICLE

Patsy M. Braxton, director of financial aid: "When you overdo one end of the scale, something is going to suffer, and nine out of ten times it's the academics."

"It is a good way to recruit quality minority students into graduate programs," Mr. Reck says. "The federal dollar is pretty important there."

The federal contribution has also been important to Appalachian's international-education curricula, he says. A new $52,000 Education Department grant for Russian, East European, and Soviet studies should enable the university to hire an instructor of Russian, Mr. Reck says. If the student demand for Russian is as great as the university anticipates, Mr. Reck says he hopes North Carolina will agree to pay the instructor's salary in the future.

Federal grants have also helped Appalachian improve its science curricula. The National Science Foundation has awarded the university $446,295 this year for laboratories used to teach computer science, biology, astronomy, and physics.

Mr. Reck says funds like the ones the N.S.F. provides for laboratories are important to universities that do not have large endowments and do not do much research—such as Appalachian. "And I would guess that the vast majority of Americans are educated at institutions like this," he says. ■

Slight Increase Sought for Humanities, but Budget for Arts Fund Is Unchanged

WASHINGTON

In its budget proposal for fiscal 1992, the Bush Administration requested cost-of-living increases for the humanities and for international scholarship. But the White House sent a message to the National Endowment for the Arts by leaving its budget unchanged.

Under the Administration's plan, the budget for the National Endowment for the Humanities would increase by $8.2-million, or about 5 per cent, to $178.2-million.

The arts endowment's budget would remain at its current level: $174-million. The agency has been the subject of controversy for two years while lawmakers and arts advocates battled over restrictions on the types of art the federal government can support.

$200,000 for Faculty Program

The humanities-endowment increase includes $200,000 for a pilot program that would give grants to college faculty members for short periods of individual study.

The N.E.H. budget also includes a notable increase in the agency's "indefinite funds," the money it uses for matching grants. Long stagnant, the indefinite funds would increase by about 13 per cent, from $27-million to $30.5-million.

Increases for Fulbright Program

Support for educational and cultural exchanges sponsored by the United States Information Agency would increase by 5.3 per cent, to $181-million.

Most of the money would go for the Fulbright Program, which sends American scholars to teach abroad and brings foreign scholars to American colleges and universities. Under the Administration's plan, more money would be designated for exchanges with Eastern Europe, the Soviet Union, and Islamic nations, while less would be spent on programs with Western Europe.

The budget of the Institute of Museum Services would rise slightly, from $25.9-million to $26-million.

Some arts and humanities advocates said the difference between the budget requests for the N.E.A. and the N.E.H. probably testified to the effectiveness of lobbying by Lynne V. Cheney, the chairman of the humanities endowment.

—CHRISTOPHER MYERS

Aid Would Increase for the Neediest, End for Many Mid-Income Students

Continued From Page A19

Grants and the College Work-Study program would both be cut by a third, saving $371-million. The remaining $200-million for the Pell program would come from eliminating federal payments to the Perkins Student Loan Program and the State Student Incentive Grant program.

Plan to Offset Work-Study Cuts

The Administration proposed that its cuts in the work-study and supplemental-grant programs be partially offset by having colleges pay half of the cost of both programs. Colleges now pay for 30 per cent of the work-study program and 15 per cent of the supplemental grants. Under their budget plan, Administration officials predicted that 75,000 fewer students would receive work-study aid in 1992-93, but 64,000 would be added to the supplemental-grant program.

Robert E. Gibbons, president of Viterbo College, said he expected that colleges would try to find the additional funds for the programs if the President's proposal became law, but he was not optimistic that they could. He suggested that current freshmen who rely on Pell Grants and work-study could get a rude awakening in two years.

"Some of them won't be around for their junior or senior year because what we do won't be enough to keep them there," Mr. Gibbons said.

The student-aid proposals were consistent with the Bush Administration's larger theme of increasing federal support for the neediest Americans while keeping costs within the budget constraints that it and Congress agreed to last fall.

"Our overall objectives are to insure that low-income students have increased access to postsecondary education; to make certain federal grant assistance goes to the neediest students; to simplify program delivery; to reduce error and abuse; and to guarantee that institutions are accountable for the performance of their programs and students," Acting Education Secretary Ted Sanders said at a press conference last week.

> **"If we leave our next generation with the awesome debt they will inherit, I think we ought to give them the educational wherewithal to solve the problem."**

Other department officials said that increasing grants for the neediest students would decrease the size of their loans and decrease default costs, which are paid by the government. Bad loans cost the government $2.4-billion in 1990.

Influx of Students Seen

Making more grant money available to the poorest students is expected to bring many into higher education who would not otherwise have attended a college or trade school, department officials said. Robert H. Davidson, director of the department's postsecondary-analysis division, said the department estimated that larger grants could "induce" 227,000 needy students into higher education. Such an influx of people would mean that 627,000 students would have to be dropped from the program to limit the number of recipients to 3 million.

Middle-income students who are dropped from the Pell Grant and work-study programs would still have access to student-loan programs and could borrow more than in the past, department officials said. The President's budget proposed that loan limits for the Stafford Student Loan program climb by $875—to $3,500 a year—for freshmen and sophomores and by $1,000—to $5,000 a year—for other undergraduates. Graduate students would still be limited to $7,500 a year under the program.

The Supplemental Loans for Students program would also have higher loan limits: an increase of $2,000 to $6,000 a year for non-freshmen and an increase of $6,000 to $10,000 a year for graduate students. Freshmen would still be limited to $4,000 under the program.

The Administration said in its budget documents that it was still considering a proposal to eliminate banks from the student-loan programs in favor of federal lending through colleges.

The President's budget proposal recommended that the government attempt to keep the increase in the maximum Pell Grant from bringing a windfall to trade schools, which enroll large numbers of the neediest students. The Administration proposed cutting aid to trade-school students by limiting the amount of tuition and fees that the federal government would pay for. The Administration suggested that the tuition limit be tied to "community-college costs."

Trade School Costs Criticized

Mr. Sanders said investigations by the department's Inspector General and other officials had caused the Administration to conclude that trade-school costs were too high. He said the department had no plan to limit the costs that the government would pay at four-year colleges and universities. "We do not recognize the same kind of problem necessarily in four-year institutions," he said.

Trade-school officials accused the Administration of taking "the wrong approach." Stephen J. Blair, president of the National Association of Trade and Technical Schools, said the government should be looking at "an educational program's outcome, not just the cost of getting in."

Education Department officials said the many proposed changes would eliminate 270,000 students from the aid system altogether in 1992-93. Mr. Davidson, the Education Department budget official, said the three changes most responsible for the decline in recipients were:

- A cutoff of aid to those attending institutions whose former students have high loan-default rates.
- The elimination of aid to students in the bottom 10 per cent of their college classes.
- The establishment of new criteria for determining whether students are financially independent of their parents.

Congress voted last fall to cut off loans to students at colleges and trade schools whose student-loan default rates are greater than 35 per cent in 1991 and 1992 and above 30 per cent in 1993 through 1995. The Administration's budget plan would make students at such institutions ineligible for all types of student aid and drop the cutoff rate to 25 per cent in 1994 and beyond.

The change in the definition of "independent" students would require that single students who have no dependents be at least 26 years old or earn $5,300 a year before they would be considered independent of their parents and qualify for larger aid awards. Many student-aid administrators have said that the present law—which says students must be at least 24 or have an annual income of $4,000—is routinely abused by wealthy families who claim that their dependent children are independent.

Increase for Trio Programs

The Bush Administration plan would also require states to be more vigilant in overseeing educational institutions (see related story on Page A27).

The President's plan calls for an increase of 14.9 per cent for the Trio programs, which serve disadvantaged high-school and college students. Part of the increase would enable the Student Support Services program to increase by 14,000 the number of college students for whom it provides tutoring and counseling. Upward Bound, Talent Search, and other programs that expose high-school students to college life would be combined into a new Precollege Outreach Program that would channel federal money through the state governments.

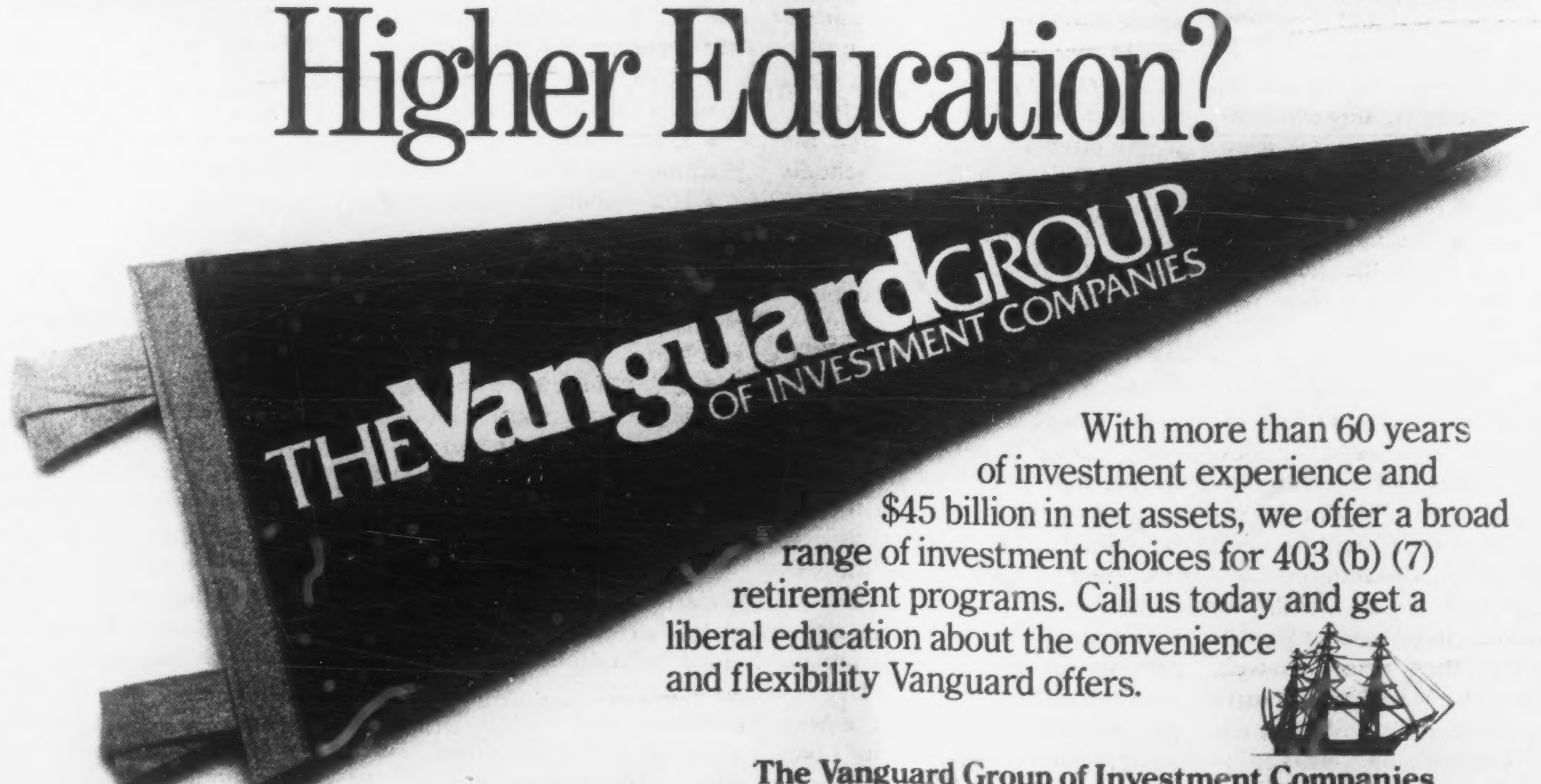
Advocates of the Trio programs said the President's proposal left them with mixed feelings. Arnold L. Mitchem, executive director of the National Council of Educational Opportunity Associations, said he was pleased with the 14-per-cent raise, but upset by the proposal to merge several of the programs. "In my view, you're destroying a network and an experience base that's been around for a while," he said.

In the area of graduate education, the President's budget would freeze spending for six fellowship programs and consolidate them into a single program. "Under this restructured program, the Secretary would have the discretion to set funding priorities each year in order best to address national needs," the Education Department said in its budget document.

Jerold Roschwalb, director of governmental relations at the National Association of State Universities and Land-Grant Colleges, said he objected to merging the fellowships—for science, engineering, teaching, the humanities, and library training—into "a strange goulash."

He added: "I don't think this thing stands a snowball's chance in hell because each of those programs has a specific purpose and a specific constituency." ■

Where Can Professors Go For Higher Education?


THE Vanguard GROUP OF INVESTMENT COMPANIES

With more than 60 years of investment experience and $45 billion in net assets, we offer a broad range of investment choices for 403 (b) (7) retirement programs. Call us today and get a liberal education about the convenience and flexibility Vanguard offers.

The Vanguard Group of Investment Companies
To add Vanguard, plan sponsors should contact Paul Heller at 1-800-345-1172.

© 1989 The Vanguard Group

Bush Proposes That States Share Risks of Guaranteeing Student Loans

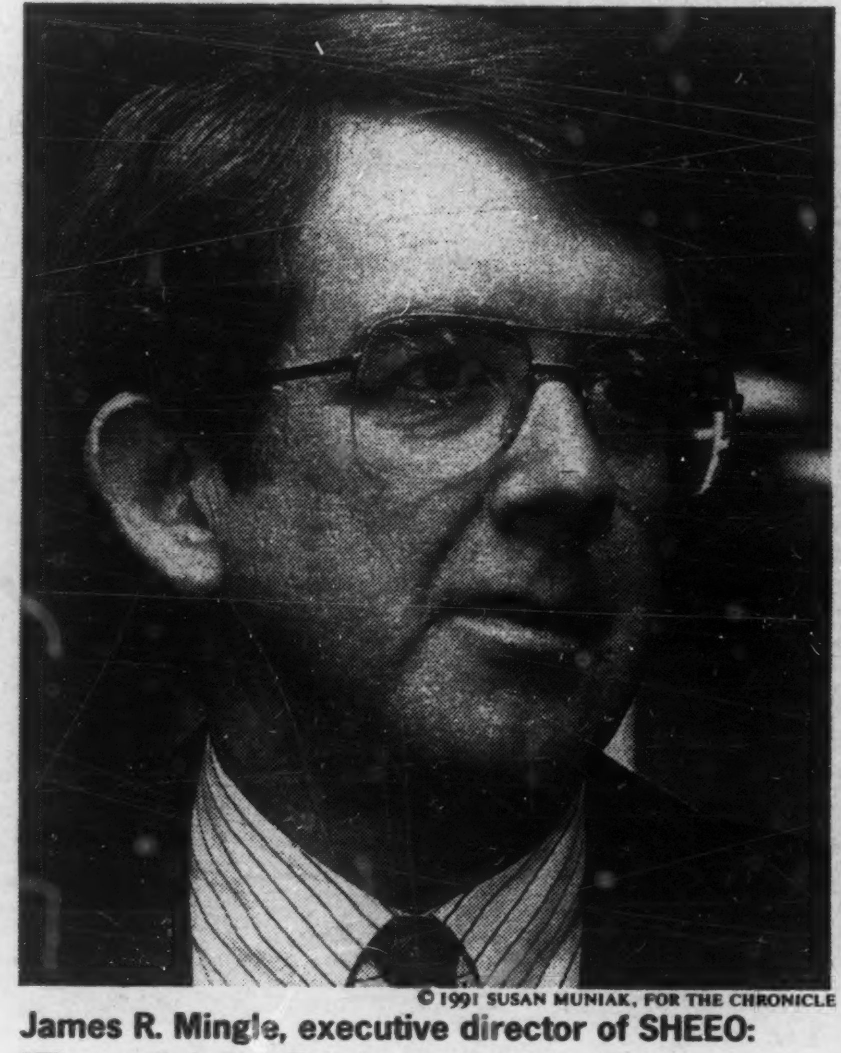
By MARY CRYSTAL CAGE

WASHINGTON

President Bush's budget proposes that states be required to share the financial risks of guaranteeing student loans. It also proposes that states be forced to increase their oversight of trade schools.

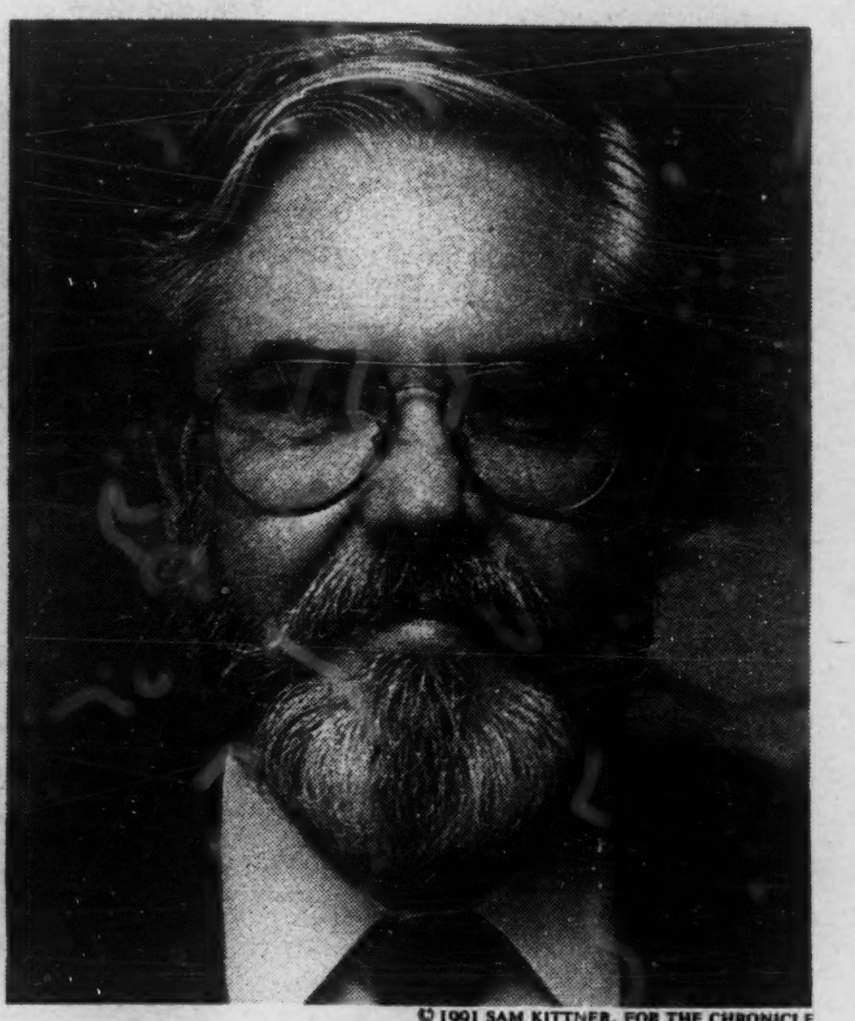
The proposals aim to cut student-loan defaults—and the federal government's costs—in two ways. First, states would be given a financial incentive to improve the management of loan-guarantee programs, which approve students' loan applications, help collect bad loans, and monitor banks' lending practices. Second, states would be forced to use their licensing authority to rein in trade schools, whose students default on loans in disproportionately high numbers.

The President's proposals came at a time when many state higher-education officials were pushing for larger roles in the regulation of both financial-aid programs and proprietary schools. The budget proposals, which would require states to deny licenses to schools that didn't meet minimum quality standards, would expand to all states the efforts that some are already making voluntarily.



© 1991 SUSAN MUNIAK, FOR THE CHRONICLE

James R. Mingle, executive director of SHEEO: "The truth is the Triad was damn ineffective."



© 1991 SAM KITTNER, FOR THE CHRONICLE

Stephen J. Blair of the trade-school association: The current tripartite system should be revitalized.

Proposal Called Inappropriate

Many state officials said last week that it was inappropriate for the federal government to impose new financial burdens on the states. The President's proposal would require states to join with the federal government in backing the agencies. If an agency collapsed, its state would reimburse lenders for any portion of their defaulted loans that was not reimbursed by the federal government.

Under current regulations, the federal government pays in full for loans that go bad unless the agency that guaranteed them has an unacceptably high default rate. If 5 per cent or more of the loans scheduled for repayment that year are in default, the government pays back only 90 per cent of each loan; if the agency's default rate rises to 9 per cent or above, the government reimburses only 80 per cent.

An agency can lose millions of dollars quickly when the federal government cuts its reimbursement rate. Such losses led to the failure last year of the Higher Education Assistance Foundation, which had been one of the nation's largest guarantee agencies.

When HEAF collapsed, it was unclear who would be responsible for the reimbursements not paid by the federal government. The Education Department moved in with a $26-million plan for handling HEAF's loans, but said it was not legally required to do so.

The budget proposal would also require a state to pay a share of the cost of defaults if the average default rate of its trade schools and colleges exceeded 20 per cent. Education Department officials say six states exceeded the 20-per-cent rate in 1988-89, but they say they will not release a list of the states until more recent information can be reviewed.

"Risk sharing," the budget document says, "will encourage states to help improve program management, to impose necessary controls on licensure, and to improve or decertify schools that cannot provide quality education."

Guidelines in Budget Pact

The five-year federal budget agreement made last year set guidelines for excluding trade schools and colleges with high default rates from student-loan programs. According to the budget document, the guidelines barred "hundreds of schools that had been abusing the system" and are expected to yield $1.7-billion in savings over the next five years. The new proposals attempt to increase those savings by tightening controls on schools and penalizing states that fail to do so.

Some states will find risk sharing easier than others, however. Although all of the guarantee agencies serve as middle men between the lending institutions and federal government, the relationships between states and the guarantee agencies that operate in them vary widely.

Some agencies are arms of state governments and have boards appointed by governors. Others are independent, non-profit entities. Still others, such as United Student Aid Funds, are non-profit corporations that contract with several states to serve as guarantor.

In any case, a state's ability to control guaranteed student loans is limited by other factors as well. Said Larry E. Matejka, executive director of the Illinois Student Assistance Commission: "This is basically a federal program. All the rules are set down by the feds."

Kenneth H. Ashworth, the Texas Commissioner of Higher Education, said he was upset with the President's plan because the student-loan programs had been established with the understanding that states would not be financially liable.

"I don't understand how the federal government can turn around and now require states to assume that responsibility," he said. "It is totally unreasonable. The federal government, not the states, promised to guarantee loans."

The President's proposal would allow states to cover their additional guarantee-program cost by dipping into general funds or by charging fees to the colleges and trade schools they license. The President would also permit a state not to back the guarantee agency that serves it, but in that case the federal government would charge the state's colleges and trade schools what the budget proposal calls a "risk-based premium." The premium would be placed in a reserve account to defray default costs.

"Somebody's going to get taxed" to pay for the state's share of the cost. "If the cost can't be shifted to the taxpayers, it's going to be shifted to the students."

State Budgets Already Strained

Mr. Ashworth said none of the options was acceptable. "Somebody's going to get taxed" to pay for the state's share of the guarantee cost, he said. "If the cost can't be shifted to the state taxpayers, it's going to be shifted to the students."

In many states, higher-education officials say their budgets are already strained. Said James L. Flippin, executive director of the Mississippi Guarantee Student Loan Agency: "If the State of Mississippi was asked to come up with $40-million to back a student-loan program, the response would be 'No deal.' The universities and colleges need more money for faculty salaries, equipment, and deferred maintenance. They could go through $40-million in a blink of an eye."

The President's push for mandatory state-licensing standards parallels a movement already taking place in the states. One association, the State Higher Education Executive Officers, is sponsoring a year-long effort to develop such standards, and the move has support from key members of Congress. A recent SHEEO report recommended that states:

- Eliminate the practice of exempting accredited schools from state licensing requirements.
- Review the finances and curricula of all trade schools.
- Track completion and job-placement rates for trade schools.
- Use "ability-to-benefit" tests that bar some students from receiving federal aid unless they demonstrate that they are capable of completing the programs they plan to enroll in.
- Spend more on enforcing regulations that govern proprietary schools, recouping the cost by increasing the schools' licensing fees.

'Triad' for Trade Schools

Currently, responsibility for regulating proprietary schools is divided, with duties shared by state agencies, the U.S. Education Department, and accrediting groups affiliated with trade-school associations. The system, called "the Triad," has been sharply criticized. Said James R. Mingle, executive director of SHEEO: "The truth is, the Triad was damned ineffective. This was a three-legged stool with all three legs broken."

The President's proposals also echoed calls by many state and federal lawmakers, who have suggested that states be given more responsibilities when Congress begins reauthorizing the Higher Education Act this year.

However, Mr. Mingle said: "Strengthened state laws alone will not solve the problem. If the federal government wants the states to police its student-aid programs, it should be prepared to pay for that oversight."

The possibility that states may play a larger, if not dominant, role in regulating proprietary schools disturbs lobbyists such as Stephen J. Blair, president of the National Association of Trade and Technical Schools.

States Have Their Own Plans

Like other trade-school representatives, Mr. Blair said the current tripartite system should be revitalized. He said the government should rely more on the trade-school accrediting agencies, which he said were already emphasizing quality control by independently confirming the information schools provide.

"What accreditation agencies do now no more resembles what they did five years ago than the phone we have today resembles the phone Alexander Graham Bell invented," he said.

Regardless of whether Congress accepts the President's budget proposals, many state officials said they would move ahead with their own plans to increase regulation of trade schools. Jamie P. Merisotis, a Washington-based consultant who prepared the SHEEO study, said: "The state role must be strengthened, irrespective of changes at the federal level. Policies and procedures vary across state lines and within states, between various regulatory agencies. Despite efforts at coordination, licensing is still a highly fractured process."

Some trade-school operators and higher-education officials expressed concern about the impact of requiring that prospective students pass tests to become eligible for aid. Said Stephen B. Friedheim, president of Executive Secretarial School in Dallas: "If the traditional higher-education entry process is being offered as an example of how effective such a doorkeeper process is, how would you explain the embarrassingly low completion and graduation rates for traditional higher education?"

Others, however, said some testing was essential if states wanted to avoid additional embarrassing reports about students taking classes for which they are totally unprepared. Said David A. Longanecker, executive director of the Colorado Commission on Higher Education: "I believe in access, but I don't believe in access to failure." ■

Business & Philanthropy

Colleges' Endowments Grew 9.6% in 1989-90, Compared With 13.9% in the Previous Year

Institutions said to trim the rates at which they spend their funds, to protect their purchasing power

By LIZ McMILLEN

WASHINGTON

The investment returns enjoyed by college and university endowments in the 1980's have sagged like much of today's economy.

In a report of its annual endowment study, the National Association of College and University Business Officers said that college funds, feeling the pinch of an economic downturn, grew by 9.6 per cent in 1989-90, down from 13.9 per cent the previous year.

The value of 367 college and university endowments on June 30, 1990, appears in a Fact File that begins on Page A32.

"Everyone wondered whether the 90's would be as favorable an economic climate for colleges as the 80's were," said Robin Jenkins, director of NACUBO's Financial Management Center. "It wasn't a horrible yield, but it wasn't what colleges saw in the 80's." College endowments grew an average of 13.4 per cent each year from 1981-90.

Noting that many private institutions were trying to limit tuition increases, Ms. Jenkins said colleges could be tempted to turn to their endowments to make up the income loss. While spending more of their endowments is an easy political solution on campuses, it could hurt their long-term financial stability, she said.

"Our concern was that institutions would try to solve their financial woes by substituting endowment income for tuition, rather than cutting costs," she added. "In 1990, most institutions seemed to resist doing that."

The study found that colleges had actually trimmed their spending rates, from an average 4.8 per cent the previous year to 4.5 per cent in 1989-90. The smallest endowments, those totaling $25-million or less, tend to spend a greater portion of their endowments than the larger funds, while private institutions spend more than public ones.

The reduction in the portion of their endowments that colleges spend is a sign that they recognize that their funds will earn less in the 90's and that lower spending rates will be necessary to protect the endowments' purchasing power, Ms. Jenkins said.

1990 Endowment Returns

All investment pools	+9.6%
By size:	
$25-million and under	+8.7%
$25-million to $100-million	+9.6%
$100-million to $400-million	+10.3%
$400-million or more	+11.3%
By type of institution:	
Public	+8.5%
Private	+10.1%
Comparative measurements:	
Standard & Poor's 500 Index	+16.5%
Lehman Brothers Government Corporate Bond Index	+7.1%
Lehman Brothers Government Bond Index	+6.9%
Consumer Price Index	+4.4%

Note: The figures represent total-return rates—including changes in market value plus dividends and interest—for the year ending June 30, 1990, based on data for investment pools at 367 colleges and universities.

SOURCE: NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS

Total Market Value: $60.1-Billion

NACUBO has studied endowments each year since 1974. The study now includes most four-year colleges and universities with endowments of at least $1-million, the association said. The study is conducted for NACUBO by Cambridge Associates, a financial-research and consulting company.

The total market value of the 367 participating college and university endowments in the year ending June 30, 1990, was $60.1-billion, compared with $54.6-billion for 330 institutions the previous year. The study measures total return, including changes in the market value of investments as well as interest and dividend income. The study covered the period from July 1, 1989, to June 30, 1990.

The 9.6-per-cent overall return was less than several stock benchmarks, including Standard & Poor's index of 500 common stocks, which rose 16.5 per cent in the period covered by the study.

Endowments reported returns ranging

Continued on Following Page

Cut Staffs but Not Across the Board, Strapped Colleges Are Advised

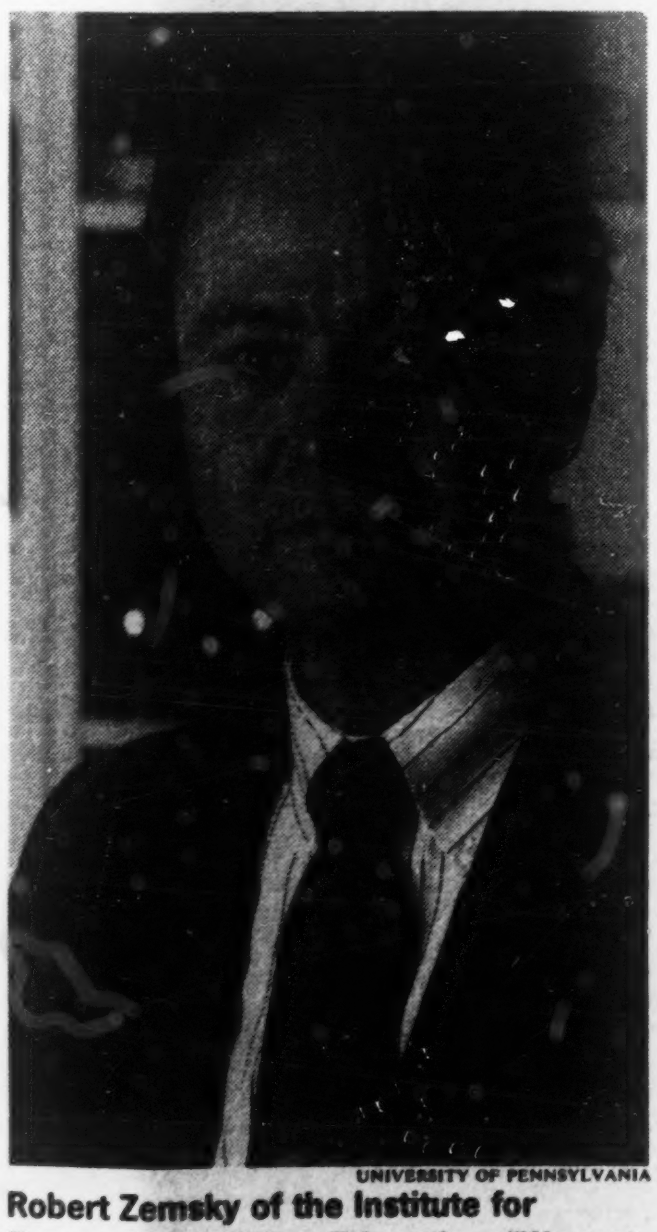
PHILADELPHIA

As a wave of cost cutting sweeps through higher education, colleges and universities must plan now for smaller staffs, avoid across-the-board cuts, and recognize that "administration is not the business of the business."

Those are some of the recommendations contained in a report released last week by the Pew Higher Education Research Program. "The Other Side of the Mountain," based on contributions from 23 academics, outlines several steps that colleges could take to improve their quality in the face of revenue constraints.

The report notes that the 1980's were a decade of unprecedented growth at colleges, with the greatest expansion occurring in administrations. The best-financed institutions, including members of the Association of American Universities and higher-priced liberal-arts colleges, grew the most, showing a rise in expenditures of more than 51 per cent between 1975 and 1986, the report says.

By contrast, it says, the 1990's will probably turn out to be a period of unprecedented austerity for higher education. "More than any time in the last half century, American colleges and universities are likely to be on their own—left to their own best instincts and to draw upon their own talents and resources as they go about the business of adjusting their appetite to the provisions at hand," the report says.



UNIVERSITY OF PENNSYLVANIA

Robert Zemsky of the Institute for Research on Higher Education: "We sort of grew everything, when we should have applied the money more purposefully."

Colleges and universities felt poor in the 1980's, when they really weren't, said Robert Zemsky in an interview. Mr. Zemsky is senior editor of *Policy Perspectives* and director of the Institute for Research on Higher Education at the University of Pennsylvania, which published the report. "We sort of grew everything, when we should have applied the money more purposefully," he said.

'We Ought to Do It Better'

Still, colleges should not be singled out for criticism, Mr. Zemsky said. "Higher education was less bloated and less wasteful than any form of American enterprise in the 80's. Every American enterprise is going through this kind of evaluation. We ought to do it better."

The Pew report, which was supported by grants from the Pew Charitable Trusts, was released as the belt tightening spread to several more universities. Yale University's President Benno C. Schmidt asked each department to reduce its budget for next year by 5 to 10 per cent, with the biggest cuts expected to come from administrative departments. "We cannot hope to

Continued on Page A34

Give & Take

The Johns Hopkins University has formed a venture-capital company to market research results.

The company, Triad Investors Corporation, has received $5.25-million from the Johns Hopkins Health System and three private investors.

Triad will identify Johns Hopkins research that has commercial potential, provide it with seed money, and help develop spin-off research companies. Johns Hopkins spent $648-million on research in fiscal 1989, the most of any university.

Jared L. Cohon, vice-provost for research at the university, said Triad had been under development for two years, with university officials securing funds for it only this year. The company is designed not to replace but to supplement the university's current efforts to move its research discoveries from the laboratory to the marketplace, he said.

Licensing and patenting of discoveries will still be handled by the university's licensing office.

The university formed Triad to bridge the gap between the marketplace and university-based research with commercial potential, Mr. Cohon said.

"The difference is that Triad's focus will be on very early-stage technologies," he said, describing the technologies as "raw" and requiring considerably more research and development before they are ready for the marketplace.

Set up as a separate corporation "at arm's length" from the university, Triad should allow commercialization to proceed with minimum involvement of faculty members and freedom from conflict-of-interest problems, Mr. Cohon added.

■

Want to buy a house? Drake University is practically giving 17 away—and will even pay you $3,000 each to move them off its campus.

Drake plans to build a $12-million multi-purpose facility on the land where the houses stand. The university is working with the City of Des Moines and the Drake Neighborhood Association to salvage the houses, which the university has rented to students and residents of the community.

Drake will auction the houses this month to buyers who can move them before April. "It is quite conceivable that a house could be sold for $1," said Alan K. Cubbage, a spokesman for Drake.

The university will even contribute $3,000 a house—about the cost of demolishing one—to help owners pay the moving costs. The total cost of relocating a house could be as high as $61,000—$58,000 with Drake's contribution.

As of last week, Drake had received some 400 inquiries from prospective buyers. Any houses not sold will be demolished so construction can begin on the new facility in April.

Feeling 90's Pinch, College Funds Grew Just 9.6% in '89-90

Continued From Preceding Page

from a high of 31.5 per cent to a loss of 10.3 per cent. The biggest range in returns occurred in colleges with endowments totaling $25-million to $100-million. The high for colleges in that group was 29.2 per cent, while the low was a loss of 10.3 per cent.

Harvard Still the Largest

The very smallest endowments—those totaling $25-million or less—meanwhile, had the smallest range of returns, from a high of 21.1 per cent to a low of 1.4 per cent. The report did not disclose the identities of colleges in its performance data.

The largest endowment continues to be Harvard University's $4.6-billion fund, up from $4.4-billion the previous year. The University of Texas ranked second overall—and first among public institutions—with a total of $3.7-billion, up from $3-billion. Eleven of the top 15 endowments were above the $1-billion mark.

Endowment wealth continued to be highly concentrated. Twenty-eight institutions with assets of $400-million or more control 55.1 per cent of the total.

Ranked by endowment per full-time-equivalent student, the Academy of the New Church led all institutions with $444,649 for each of the 319 people it enrolled. Among public universities, the Oregon Health Sciences University Foundation was the leader, with $36,905 for each of the 1,289 people enrolled.

Few changes occurred in the allocation of endowment assets to various investments. The average endowment had 48.1 per cent in domestic common stock, 33.1 per cent in bonds, 10.9 per cent in cash or cash equivalents, and the remainder in other investments.

Foreign-Security Investment

The biggest trend in endowment investments was the number of colleges putting money in foreign securities, the report said. The study found that 127 colleges and universities had invested in foreign stocks, up from 98 the previous year.

"While colleges were generally cautious, they are looking to foreign stocks, especially if the U.S. economy stays flat," Ms. Jenkins said.

Investments in real estate remained at the same level as in 1989 (nearly half of the participants said they owned real estate), reflecting the unwillingness of institutions to commit additional funds to such a distressed sector of the economy, the report said.

A summary of the report of the study appears in the February issue of *Business Officer*, NACUBO's monthly magazine.

Copies of the complete report are available for $50 each for members of the association and $75 for others from NACUBO Publications, P.O. Box 96164, Washington 20090-6164. Copies of an executive survey are available for $20 for members and $30 for others. ■

FACT FILE: Value of 367 Endowments on June 30, 1990

1990 rank	Institution	Market value	
		June 30, 1989	June 30, 1990
1.	Harvard University	$4,478,976,000	$4,653,229,000
2.	University of Texas System	3,021,474,000	3,731,826,000
3.	Yale University	2,336,495,000	2,570,892,000
4.	Princeton University	2,483,829,000	2,527,140,000
5.	Stanford University [1]	1,775,000,000	2,053,128,000
6.	Columbia University	1,460,356,000	1,494,938,000
7.	Massachusetts Institute of Technology	1,256,165,000	1,404,588,000
8.	Washington University	1,294,209,000	1,365,854,000
9.	Emory University	923,612,000	1,153,875,000
10.	University of Chicago	973,697,000	1,074,505,000
11.	Rice University	970,817,000	1,068,633,000
12.	Northwestern University	893,680,000	983,556,000
13.	Cornell University	823,000,000	926,900,000
14.	University of Pennsylvania	761,408,000	808,409,000
15.	University of Notre Dame	542,501,000	605,630,000
16.	Vanderbilt University	556,567,000	603,708,000
17.	Dartmouth College	632,027,000	593,952,000
18.	University of Rochester	538,078,000	589,007,000
19.	Johns Hopkins University	527,209,000	560,478,000
20.	Rockefeller University	522,663,000	544,274,000
21.	New York University	540,315,000	542,672,000
22.	California Institute of Technology	477,879,000	523,729,000
23.	University of Southern California	459,828,000	495,595,000
24.	University of Virginia	446,476,000	487,007,000
25.	Duke University	426,183,000	472,923,000
26.	University of Michigan	422,809,000	448,209,000
27.	Brown University	398,100,000	425,750,000
28.	Case Western Reserve University	381,075,000	421,820,000
29.	Wellesley College	341,746,000	374,127,000
30.	University of Delaware	329,280,000	360,278,000
31.	Southern Methodist University	334,643,000	355,322,000
32.	Smith College	325,759,000	341,927,000
33.	Swarthmore College	304,911,000	336,014,000
34.	Ohio State University	287,298,000	321,880,000
35.	Macalester College [2]	not reported	320,127,000
36.	Wake Forest University	284,670,000	318,511,000
37.	Williams College	290,637,000	314,679,000
38.	University of Cincinnati	273,133,000	314,461,000
39.	University of Tulsa [2]	272,720,000	309,769,000
40.	Loyola University of Chicago	246,236,000	309,459,000
41.	Carnegie Mellon University	291,271,000	299,168,000
42.	George Washington University	265,772,000	296,677,000
43.	Pomona College	271,053,000	295,982,000
44.	Texas Christian College [2]	not reported	290,816,000
45.	Grinnell College	294,328,000	286,770,000
46.	Trinity University [2]	266,670,000	285,933,000
47.	University of Richmond	265,310,000	280,567,000
48.	University of Pittsburgh	259,144,000	279,641,000
49.	Boston College [2]	250,005,000	276,314,000
50.	University of Minnesota	247,438,000	275,255,000
51.	Berea College	252,052,000	271,114,000
52.	Wesleyan University	275,138,000	270,948,000
53.	Amherst College	266,506,000	269,441,000
54.	Baylor University [2]	235,316,000	250,377,000
55.	Lehigh University	225,628,000	244,043,000
56.	Georgetown University	240,674,000	242,255,000
57.	Vassar College	226,953,000	240,670,000
58.	Rensselaer Polytechnic Institute	209,406,000	240,078,000
59.	Tulane University	221,424,000	233,417,000
60.	Oberlin College	220,870,000	229,515,000
61.	Middlebury College	216,920,000	227,488,000
62.	Kansas University Endowment Association	203,595,000	226,008,000
63.	University of Florida Foundation	198,207,000	218,559,000
64.	Lafayette College	187,117,000	206,081,000
65.	Georgia Institute of Technology	158,174,000	200,446,000
66.	Thomas Jefferson University	185,229,000	196,033,000
67.	Saint Louis University	160,779,000	188,134,000
68.	Pennsylvania State University	166,850,000	180,457,000
69.	Boston University	150,547,000	180,272,000
70.	Mount Holyoke College	163,664,000	180,000,000
71.	University of Nebraska	155,284,000	178,213,000
72.	Carleton College	157,632,000	175,793,000
73.	University of Minnesota Foundation	142,453,000	173,899,000
74.	University of Miami [2]	$142,363,000	$170,978,000
75.	Purdue University	133,431,000	170,760,000
76.	University of Washington	147,978,000	170,071,000
77.	University of North Carolina at Chapel Hill	151,562,000	169,082,000
78.	Rochester Institute of Technology	155,630,000	165,807,000
79.	Washington State University	144,697,000	165,386,000
80.	Syracuse University	144,015,000	165,042,000
81.	Principia College	not reported	160,922,000
82.	Northeastern University	not reported	157,237,000
83.	Tufts University	130,666,000	155,615,000
84.	University of Alabama System [1]	135,000,000	155,000,000
85.	Bryn Mawr College	133,917,000	154,602,000
86.	Rush University	135,353,000	154,410,000
87.	Brandeis University	144,618,000	153,137,000
88.	Bowdoin College	144,156,000	151,744,000
89.	State University of New York at Buffalo	152,097,000	149,632,000
90.	Occidental College	145,211,000	147,278,000
91.	University of Missouri	131,968,000	146,545,000
92.	University of Illinois Foundation	117,478,000	143,348,000
93.	Agnes Scott College	114,823,000	142,747,000
94.	Academy of the New Church	140,016,000	141,843,000
95.	Colorado College	123,047,000	137,694,000
96.	Trinity College (Conn.)	113,160,000	137,348,000
97.	Colgate University	123,309,000	137,153,000
98.	Earlham College	122,247,000	132,790,000
99.	Wabash College	not reported	129,621,000
100.	University of Wisconsin Foundation	112,126,000	127,271,000
101.	Southwestern University	114,554,000	126,673,000
102.	University of Oklahoma and Foundation	not reported	122,741,000
103.	Virginia Tech Foundation	105,800,000	117,400,000
104.	Hamilton College	113,945,000	114,519,000
105.	Rutgers University	112,097,000	114,002,000
106.	Cranbrook Educational Community	104,863,000	111,213,000
107.	Santa Clara University	96,781,000	110,562,000
108.	Washington and Lee University	101,169,000	109,484,000
109.	University of Tennessee System	90,991,000	107,145,000
110.	Loyola Marymount University	96,558,000	106,353,000
111.	Cooper Union	100,375,000	106,053,000
112.	Claremont McKenna College	92,666,000	103,078,000
113.	University of Wisconsin System	97,849,000	101,373,000
114.	Radcliffe College	91,574,000	99,986,000
115.	Whitman College	95,455,000	99,935,000
116.	Worcester Polytechnic Institute	97,298,000	98,236,000
117.	Bucknell University	87,335,000	98,193,000
118.	Union College (N.Y.)	95,238,000	97,684,000
119.	Mercer University	93,041,000	97,486,000
120.	University of the South	92,328,000	97,085,000
121.	University of Louisville Foundation	81,173,000	95,021,000
122.	College of Saint Thomas	83,573,000	94,179,000
123.	University of Georgia and Foundation	not reported	93,128,000
124.	De Pauw University	77,561,000	92,422,000
125.	Reed College	74,528,000	89,662,000
126.	College of William and Mary	73,653,000	87,591,000
127.	Wheaton College (Ill.)	not reported	86,906,000
128.	University of Houston System	not reported	86,589,000
129.	University of California at Los Angeles Foundation	68,493,000	85,403,000
130.	Franklin and Marshall College	78,703,000	85,356,000
131.	Davidson College	79,496,000	85,092,000
132.	Haverford College	78,119,000	83,876,000
133.	Marquette University	71,972,000	83,085,000
134.	College of the Holy Cross	79,031,000	81,055,000
135.	University of Iowa Foundation	68,078,000	80,741,000
136.	Rhodes College	76,175,000	80,156,000
137.	Drew University	not reported	80,064,000
138.	St. Lawrence University	80,049,000	80,058,000
139.	Furman University [2]	73,160,000	79,748,000
140.	Hampton University	75,359,000	78,221,000
141.	Colby College	74,035,000	77,682,000
142.	University of Kentucky	70,455,000	76,046,000
143.	Denison University	69,184,000	75,071,000
144.	Austin College	68,464,000	74,940,000
145.	University of Vermont	71,689,000	74,924,000
146.	College of Wooster	69,210,000	74,707,000

[1] As of September 30
[2] As of May 31
[3] As of August 31
[4] As of July 31
[5] As of April 30
[6] As of December 31

1990 rank	Institution	Market value	
		June 30, 1989	June 30, 1990
147.	Willamette University [2]	$72,176,000	$74,498,000
148.	Kansas State University Foundation	62,608,000	71,226,000
149.	Mills College	68,275,000	71,220,000
150.	Berry College	60,459,000	70,200,000
151.	Fordham University	61,653,000	69,798,000
152.	University of Colorado Foundation	57,356,000	68,475,000
153.	Lawrence University	69,590,000	68,024,000
154.	Harvey Mudd College	63,143,000	67,530,000
155.	Indiana University	60,595,000	66,318,000
156.	Ohio University	62,463,000	65,523,000
157.	West Virginia University	not reported	64,351,000
158.	University of Nevada System	56,056,000	62,546,000
159.	Bates College	not reported	62,504,000
160.	Simmons College	62,535,000	62,447,000
161.	Ithaca College	56,743,000	62,030,000
162.	Michigan State University	51,012,000	61,733,000
163.	Scripps College	56,869,000	61,253,000
164.	Temple University	54,501,000	60,717,000
165.	University of Dayton	51,224,000	60,691,000
166.	Virginia Commonwealth University	53,770,000	60,219,000
167.	Goucher College	57,490,000	59,760,000
168.	Rhode Island School of Design	53,045,000	58,892,000
169.	University of South Carolina	47,373,000	57,321,000
170.	University of Arizona	55,300,000	55,790,000
171.	University of Hawaii	49,941,000	55,216,000
172.	University of Maryland System	52,471,000	54,556,000
173.	Bentley College	49,791,000	52,964,000
174.	Albion College	49,894,000	52,853,000
175.	Samford University [2]	not reported	52,307,000
176.	Teachers College, Columbia University [3]	54,786,000	52,239,000
177..	Claremont University Center	50,603,000	52,211,000
178.	Hendrix College [4]	49,950,000	51,983,000
179.	University of Puget Sound	44,724,000	51,581,000
180.	Spelman College	46,940,000	51,478,000
181.	Oregon State System of Higher Education	47,139,000	51,221,000
182.	Philadelphia College of Pharmacy and Science	48,284,000	51,220,000
183.	Allegheny College	47,785,000	51,101,000
184.	Clemson University and Foundation	42,892,000	50,725,000
185.	Centre College of Kentucky	45,076,000	50,690,000
186.	Sweet Briar College	47,300,000	50,045,000
187.	Auburn University [1]	52,354,000	49,519,000
188.	Creighton University	42,271,000	48,206,000
189.	Randolph-Macon Woman's College	43,851,000	47,944,000
190.	University of Medicine and Dentistry of New Jersey	not reported	47,909,000
191.	University of Illinois	43,385,000	47,835,000
192.	University of Denver	46,456,000	47,631,000
193.	Oregon Health Sciences University Foundation	44,080,000	47,570,000
194.	Transylvania University	40,357,000	47,464,000
195.	Dickinson College	44,365,000	46,492,000
196.	North Carolina State University	42,752,000	46,187,000
197.	Hartwick College	42,933,000	45,457,000
198.	Clark University [2]	41,119,000	44,930,000
199.	University of South Florida Foundation	not reported	44,497,000
200.	Barnard College	43,969,000	44,413,000
201.	University of Mississippi	37,707,000	44,059,000
202.	Wayne State University	39,510,000	44,011,000
203.	Alma College	41,722,000	43,933,000
204.	Morehouse College	not reported	43,854,000
205.	University of Tennessee at Chattanooga	38,032,000	43,159,000
206.	Baldwin-Wallace College	39,995,000	42,671,000
207.	Gettysburg College [2]	35,679,000	41,865,000
208.	Buena Vista College	35,472,000	41,800,000
209.	Kalamazoo College	38,765,000	41,637,000
210.	Wittenberg University	40,005,000	40,418,000
211.	Ohio Wesleyan University	not reported	40,413,000
212.	Ursinus College	not reported	40,236,000
213.	Hollins College	38,053,000	40,067,000
214.	Rider College	33,394,000	39,780,000
215.	Seattle University	31,772,000	39,748,000
216.	Connecticut College	35,581,000	39,243,000
217.	Clarkson University	34,953,000	39,152,000
218.	Iowa State University Foundation	not reported	38,959,000
219.	St. Olaf College [2]	32,792,000	38,643,000
220.	Oregon State University Foundation	29,377,000	38,635,000
221.	De Paul University	34,235,000	38,294,000
222.	University of Akron	$33,980,000	$38,083,000
223.	Texas Tech University [3]	29,054,000	37,256,000
224.	University of San Francisco [2]	31,682,000	37,054,000
225.	Washburn Endowment Association	33,874,000	36,851,000
226.	Lewis and Clark College	not reported	35,772,000
2[illegible].	Stonehill College	not reported	35,590,000
228.	Skidmore College	31,243,000	35,424,000
229.	Norwich University	28,101,000	35,166,000
230.	St. John's University (Minn.)	not reported	34,790,000
231.	Hampden-Sydney College	30,339,000	34,567,000
232.	Beloit College [2]	31,084,000	34,043,000
233.	California State University	not reported	33,857,000
234.	Bryant College	30,657,000	33,797,000
235.	New York Medical College	25,064,000	32,853,000
236.	Lake Forest College [2]	29,355,000	32,779,000
237.	Mount Union College	not reported	32,491,000
238.	Oklahoma State University Foundation	25,448,000	32,111,000
239.	Hood College	not reported	32,050,000
240.	University of Alaska	28,500,000	31,855,000
241.	University of Toledo	not reported	31,335,000
242.	Illinois College	27,423,000	30,829,000
243.	Drake University [2]	20,800,000	30,759,000
244.	Florida State University Foundation	not reported	30,725,000
245.	Bethany College (W.Va.)	24,134,000	30,193,000
246.	Bowling Green State University	25,665,000	29,724,000
247.	Muhlenberg College	28,777,000	28,941,000
248.	Babson College	24,929,000	28,758,000
249.	Knox College	28,019,000	28,732,000
250.	Saint Mary's College (Ind.)	25,854,000	28,716,000
251.	Regis College (Mass.)	25,173,000	28,712,000
252.	University of Maine System	26,300,000	28,600,000
253.	Hope College	23,766,000	28,192,000
254.	University of Oregon Foundation	24,386,000	28,075,000
255.	Wentworth Institute of Technology	38,446,000	27,953,000
256.	Wells College	27,050,000	27,377,000
257.	Miami University	25,464,000	26,805,000
258.	New School for Social Research	22,628,000	26,767,000
259.	University of Scranton [2]	21,709,000	26,425,000
260.	John Carroll University [2]	21,950,000	26,329,000
261.	University of Hartford	24,123,000	26,056,000
262.	Stetson University [2]	not reported	25,849,000
263.	Medical College of Wisconsin	26,255,000	25,554,000
264.	Juniata College	23,441,000	25,438,000
265.	Susquehanna University	not reported	25,434,000
266.	Roanoke College	25,164,000	25,339,000
267.	Lynchburg College	23,794,000	25,306,000
268.	Suffolk University	not reported	24,734,000
269.	California Institute of the Arts	24,300,000	24,478,000
270.	Rollins College [2]	not reported	24,372,000
271.	University of North Carolina at Greensboro	20,447,000	24,144,000
272.	Rockhurst College	not reported	23,838,000
273.	Chapman College [2]	not reported	23,715,000
274.	Randolph-Macon College	21,642,000	23,567,000
275.	Marietta College	22,258,000	23,203,000
276.	High Point College [2]	not reported	23,031,000
277.	Guilford College [2]	20,553,000	22,658,000
278.	St. John's College (Md.)	22,470,000	22,617,000
279.	Ohio Northern University	21,556,000	22,593,000
280.	Dillard University	21,608,000	22,572,000
281.	Mississippi State University	25,949,000	22,570,000
282.	University of Indianapolis	not reported	22,482,000
283.	Canisius College	20,916,000	22,211,000
284.	Alfred University	21,061,000	22,208,000
285.	Doane College	not reported	22,004,000
286.	Fairfield University	20,447,000	21,403,000
287.	Pitzer College	14,222,000	21,282,000
288.	University of Redlands	21,355,000	20,777,000
289.	Xavier University (Ohio)	19,072,000	20,730,000
290.	University of Dallas [2]	not reported	20,671,000
291.	Cornell College	22,691,000	20,451,000
292.	American University [5]	19,127,000	19,811,000
293.	Saint Norbert College	18,698,000	19,258,000
294.	Old Dominion University	18,276,000	19,189,000
295.	University of Arkansas	not reported	19,170,000
296.	Ripon College	17,282,000	19,068,000

Continued on Following Page

Lilly Gives RAND $10-Million Grant for New Institute

By JULIE L. NICKLIN

The Lilly Endowment has awarded $10-million to the research organization RAND to establish an "Institute on Education and Training."

The grant, which will be distributed over five years, will allow the institute to examine ways in which people learn. Its research will focus on formal education from preschool through college, as well as on employee-training programs provided by businesses and the military. According to RAND, studies will also focus on what it calls "extra-school learning" within families and through the media. Findings will be reported through publications and workshops.

RAND, based in Santa Monica, Cal., is a private, non-profit organization that analyzes problems affecting the nation's security and domestic welfare. It also operates the RAND Graduate School, which, as a result of the Lilly grant, will begin offering a doctoral degree in education policy.

The Lilly Endowment was established in 1937 by three members of the Lilly family—J. K. Lilly, Sr., and his sons J. K., Jr., and Eli—through the gift of stock in Eli Lilly and Company, the pharmaceutical business.

Markey Fund Gives $9.5-Million to 3 Institutions

The Lucille P. Markey Charitable Trust has awarded grants totaling $9.5-million to support basic medical research at three institutions.

The largest grants, of $4-million each, will go to the University of Rochester School of Medicine and Dentistry and to the Fox Chase Cancer Center in Philadelphia. The Birmingham campus of the University of Alabama will receive $1.5-million.

For Brain and Neural Studies

Rochester's Neurobiology Institute will use the money to support brain and neural research. Fox Chase's grant will support research projects that study genetic influences on the development of cancerous cells and on the normal physiology of the affected genes. Alabama's Neurobiology Research Center will use its grant to support two new faculty positions and to purchase equipment to advance the center's study of brain development, learning, perception, and movement.

The Markey Trust was established by the will of Ms. Markey, owner of Calumet Farm, a thoroughbred-breeding and racing stable in Lexington, Ky. Her will directed that the entire trust be distributed by 1997—15 years after her death—to non-profit organizations that sponsor medical research. Since the first grant in 1983, the trust has awarded more than $290-million.

—JULIE L. NICKLIN

FACT FILE: Value of 367 Endowments, Continued

1990 rank	Institution	Market value	
		June 30, 1989	June 30, 1990
297.	Salem College	$17,387,000	$18,941,000
298.	Washington College	18,352,000	18,724,000
299.	Moravian College	18,001,000	18,431,000
300.	Mary Baldwin College	16,079,000	18,365,000
301.	La Salle University	not reported	18,138,000
302.	Monmouth College (Ill.)	16,887,000	17,451,000
303.	Hiram College	21,791,000	16,831,000
304.	San Diego State University Foundation	14,948,000	16,714,000
305.	Otterbein College	not reported	16,662,000
306.	John Brown University	not reported	16,630,000
307.	Morningside College [2]	15,368,000	16,596,000
308.	Nazareth College of Rochester	15,682,000	16,275,000
309.	Southern California College of Optometry	not reported	16,016,000
310.	Marywood College	14,181,000	15,768,000
311.	Western Michigan University	13,444,000	15,543,000
312.	Elizabethtown College	14,508,000	15,467,000
313.	Ouachita Baptist University [2]	14,328,000	15,184,000
314.	Albright College [2]	14,585,000	15,131,000
315.	Southwest Texas State University [3]	14,856,000	15,125,000
316.	Sarah Lawrence College [2]	12,818,000	14,976,000
317.	Memphis State University	12,429,000	14,791,000
318.	Saint Bonaventure University [2]	not reported	14,660,000
319.	Utah State University	13,995,000	14,607,000
320.	Arizona State University	13,693,000	14,439,000
321.	Emporia State University [6]	13,431,000	14,254,000
322.	Georgetown College	not reported	14,031,000
323.	Madonna College	11,828,000	14,002,000
324.	Iowa State University	not reported	13,997,000
325.	King's College (Pa.)	12,702,000	13,624,000
326.	Western Maryland College	13,290,000	13,502,000
327.	State University of New York Health Science Center at Brooklyn College of Medicine	12,687,000	13,330,000
328.	Carroll College (Wis.)	not reported	13,224,000
329.	Western New England College	11,985,000	13,074,000
330.	Le Moyne College [2]	not reported	12,834,000
331.	University of Evansville [2]	11,767,000	12,577,000
332.	Christian Brothers University [2]	not reported	12,532,000
333.	East Tennessee State University and Foundation	8,786,000	12,154,000
334.	Ball State University Foundation	9,521,000	11,920,000
335.	McPherson College	not reported	11,524,000
336.	University of Rhode Island	11,712,000	11,512,000
337.	Warren Wilson College	not reported	9,998,000
338.	Monmouth College (N.J.)	9,274,000	9,941,000
339.	Stephens College [2]	9,659,000	9,369,000
340.	Pittsburg State University	6,233,000	9,009,000
341.	Sage Colleges	8,060,000	8,940,000
342.	St. John Fisher College [2]	8,009,000	8,124,000
343.	Merrimack College	not reported	7,788,000
344.	Harrisburg Area Community College	not reported	7,768,000
345.	Bellarmine College [2]	7,199,000	7,650,000
346.	Widener University	6,409,000	7,622,000
347.	Philadelphia College of Textiles and Science	not reported	7,439,000
348.	Grand Valley State University	6,086,000	7,141,000
349.	State University of New York Health Science Center at Syracuse	6,918,000	6,956,000
350.	Seattle Pacific University	not reported	6,953,000
351.	State University of New York Stony Brook Foundation	5,765,000	6,531,000
352.	Rosemont College	6,092,000	6,399,000
353.	Long Island University [2]	not reported	6,370,000
354.	Mount Mercy College	6,023,000	6,340,000
355.	Eastern Illinois University	not reported	6,048,000
356.	Ferris State University	not reported	5,820,000
357.	University of Guam [1]	not reported	5,597,000
358.	Southwest Missouri State University Foundation	3,828,000	4,290,000
359.	Kentucky Wesleyan College	3,394,000	4,010,000
360.	Salisbury State University	not reported	3,815,000
361.	Walla Walla College	not reported	3,383,000
362.	Alverno College	not reported	3,136,000
363.	State University of New York Potsdam College Foundation	2,717,000	3,091,000
364.	Oakland University	2,687,000	3,072,000
365.	State University of New York Plattsburgh College Foundation [6]	2,187,000	2,863,000
366.	State University of New York, all campuses except those listed separately	2,202,000	2,328,000
367.	Indiana University of Pennsylvania	1,869,000	2,009,000

Note: Table includes 367 institutions participating in the comparative-performance study by the National Association of College and University Business Officers.

[1] As of September 30
[2] As of May 31
[3] As of August 31
[4] As of July 31
[5] As of April 30
[6] As of December 31

Colleges Are Advised to Trim Staffs and Avoid Across-the-Board Cuts

Continued From Page A31

continue all of the programs and services we now offer without inevitably weakening many of them," the president said in a letter to faculty members.

Over the past several years, Mr. Schmidt said, the university's expenses have grown at a higher rate than the income from tuition, endowment spending, grants and contracts, and gifts. The imbalance between revenues and expenditures, as well as the need to refurbish a deteriorating physical plant, would force the university to make painful choices, he said. A university committee has said that Yale must spend at least $57-million a year for the next decade simply to prevent further decline in its buildings.

Martha K. Matzke, Yale's director of public affairs, said faculty salaries would not be affected by the cuts, nor would the institution's policy of need-blind admissions. Ms. Matzke said the cutbacks were "just the beginning of a period of contraction" that might include eliminating some faculty positions, initially through attrition and normal departures. "In a way, the starting gun has gone off at Yale," she said.

Hiring Freeze at Brown U.

Brown University, meanwhile, imposed a hiring freeze, among other measures, to avert a $2.7-million deficit. Department heads have been asked to control travel expenses and other "non-essential" spending and to refrain from hiring outside consultants. Brown's President Vartan Gregorian has devoted his entire $1.3-million contingency fund to help erase the deficit.

Mark Nickel, a university spokesman, said Brown's deficit is mostly due to a slump in revenues, including shortfalls in graduate tuition, the annual fund, and investment income. University administrators are now looking at ways to create a stronger link between planning and budgeting.

The latest Pew report, one of several released by the group in the last year and a half to address college financial issues, says higher education will face yet another dilemma as it went about restructuring. "Last hired cannot mean first fired," it says.

Colleges have substantially increased the number of women and minority-group members on their staffs, the report notes. In many cases, it says, such people have been integrated into the work force. In others, diversity has been achieved by increasing the size of administrative staffs, often concentrating new employees in personnel and student services, the report says.

Case Studies of 5 Institutions

"Institutions that have purchased only the appearance of diversity by the creation of jobs not central to the educational mission will find themselves trying to strike an impossible balance between maintaining diversity and reducing employment levels," the report says. "The standard to which all institutions must be held is simply stated: Cost containment cannot come at the expense of institutional diversity."

Based on case studies of five institutions, the panel recommends that in cutting costs, colleges should:

> **"The standard to which all institutions must be held is simply stated: Cost containment cannot come at the expense of institutional diversity."**

- Involve faculty members. The expansion of administrative staffs is partly due to the spreading of responsibilities once considered part of the faculty role. Faculty members must be willing to reconsider their workload, their tenure requirements, and their commitment to their institution, rather than to a single discipline.
- Coordinate top-down leadership with bottom-up management. The responsibility of presidents and other top administrators is to provide managers with a set of "expected outcomes." The managers' responsibility is to deliver those outcomes, using whatever resources and strategies are effective and appropriate.
- Simplify the organization. Along with the growth in administrations has been an increase in the number of separately organized functions, each with its own department, often comprising fewer than four members. Even if large universities continue to have large and complex administrations, small colleges simply cannot, the report says. With less money to spend and more demands on their financial-aid budgets, it says, small colleges will have to make the same proportional cuts as their larger, often better financed, competitors.

The report appears in the February issue of *Policy Perspectives*. Copies are available from the Institute for Research on Higher Education, 4200 Pine Street, Fifth Floor, Philadelphia 19104-4090.

—LIZ McMILLEN

Private Grants and Gifts

ANDERSEN FOUNDATION
c/o Andersen Corporation
Bayport, Minn. 55003

Unrestricted. $200,000 to Gardner-Webb College.

KATHLEEN PRICE AND JOSEPH M. BRYAN FAMILY FOUNDATION
One North Pointe, Suite 170
3101 North Elm Street
Greensboro, N.C. 27408

Student aid. For scholarships: $50,000 to Winston-Salem State U.

EXXON EDUCATION FOUNDATION
P.O. Box 101
Florham Park, N.J. 07932

General education. For a national institute on general education: $175,000 to Association of American Colleges and U. of North Carolina at Asheville.

GEBBIE FOUNDATION
Hotel Jamestown Building
Jamestown, N.Y. 14701

Facilities. For a new dormitory: $1.2-million to Wheaton College (Mass.).

GE FOUNDATION
3135 Easton Turnpike
Fairfield, Conn. 06431

Engineering. For design-oriented courses in manufacturing: $120,000 each over three years to Lehigh U. and U. of Illinois at Urbana-Champaign.

GENERAL MILLS FOUNDATION
P.O. Box 1113, Minneapolis 55440

Black colleges. For support of programs: $70,000 to United Negro College Fund.

Support. For programs at the new Minneapolis campus: $100,000 over two years to U. of St. Thomas.

DAISY MARQUIS JONES FOUNDATION
620 Granite Building
130 East Main Street
Rochester, N.Y. 14604-1620

Facilities. For renovation projects: $250,000 to Keuka College.

LILLY ENDOWMENT
2801 North Meridian Street
P.O. Box 88068
Indianapolis 46208

Education. To establish an Institute on Education and Training: $10-million over three years to Rand.

JOHN D. AND CATHERINE T. MacARTHUR FOUNDATION
140 South Dearborn Street
Chicago 60603

Planning. For comprehensive planning: $300,000 to Institute of American Indian Arts.

MEYER MEMORIAL TRUST
1515 S.W. Fifth Avenue
Portland, Ore. 97201

Science education. For high-tech optometry instruments: $738,000 to Pacific U.

MORIAH FUND
445 North Pennsylvania Street
Indianapolis 46204

Student aid. For scholarships for minority-group students: $500,000 to Butler U.

CHARLES STEWART MOTT FOUNDATION
1200 Mott Foundation Building
Flint, Mich. 48502-1851

Black colleges. For a project to provide management-development services to historically black colleges and universities: $100,000 to Council of Independent Colleges.

—For the endowment: $500,000 challenge grant to Bethune-Cookman College.

NORTHWEST AREA FOUNDATION
W-975 First National Bank Building
332 Minnesota Street
St. Paul 55101-1373

Hazardous waste. For a program to manage infectious and hazardous waste in a five-county area of rural Iowa: $109,200 to U. of Northern Iowa.

Health care. To examine rural health-care services in the region covered by the foundation: $292,556 to U. of Minnesota.

Manufacturing. To provide technical assistance to regional manufacturing networks: $117,885 to U. of Washington.

F. W. OLIN FOUNDATION
780 Third Avenue
New York 10017

Research. For collaborative student-faculty research projects: $100,000 to St. Norbert College.

Support. For support of programs: $100,000 to Florida Institute of Technology.

PROCTER AND GAMBLE FUND
P.O. Box 599
Cincinnati 45201

Support. For the capital campaign: $1.25-million over five years to Miami U.

GIFTS & BEQUESTS

Illinois College. For a new learning center and the endowment: $1-million from Vance, Katherine, Davis, and Adelaide Kirby.

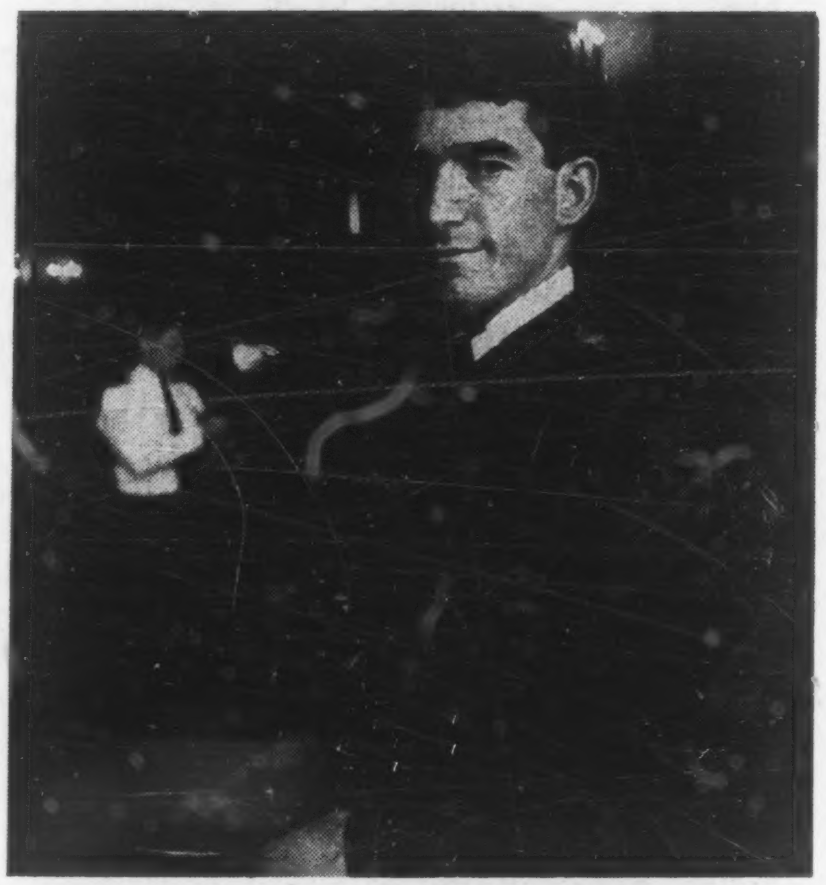
Lynchburg College. For scholarships in education or religion: $304,525 from the estate of William F. Miles.

Pikeville College. For the endowment: $745,200 from the estate of Sarah Ernst Darnall.

University of Nebraska at Lincoln. For the film theater: $3.5-million from Mary Riepma Ross.

© 1991 PHOTOGRAPHS FOR THE CHRONICLE BY SAM KITTNER

David Holdsworth will serve on a nuclear submarine: "We talk about the land tactics in my computer-security class and about the psychology of war in my personality-theory class."



Scott Dillon plans to become a flight officer: "The war still seemed like an abstraction until now."

Deborah Smetana hopes to become an intelligence officer: "In war, it's easier to see its importance."

Dean Robison chose to go into the Marine Corps: "I've always wanted to have a job leading other Marines in combat—that would make me very happy."

Naval Academy

Continued From Preceding Page

Marine Corps last week, said his training could be trimmed from a year to a few months if a larger number of Marines were needed in the Gulf. Mr. Robison has the gung-ho attitude Marines are famous for. "I've always wanted to have a job leading other Marines in combat—that would make me very happy," he said, a big grin spreading over his face.

Other midshipmen seemed more anxious about the Persian Gulf war. "I don't know anybody who's not worried," said Michiko Martin, who chose to go into oceanography. "I hope it's over soon."

For midshipmen and their professors, the war hit close to home last month when television news programs aired pictures of Lieut. Jeffrey Zaun, a 1984 academy graduate who is being held captive in Iraq. When the midshipmen saw the news, they decided to make a banner to send to Lieutenant Zaun's parents. Thousands of midshipmen signed the 31-foot-long banner, which read, "You Have 4,325 Friends in Annapolis."

Few of the midshipmen knew Lieutenant Zaun, but news of his capture "bound us all together," said Christian Wortman, who will join the Marines after graduation.

Many of the midshipmen said the war had given their education at the Naval Academy more meaning. "If anything, the war is a bit of concrete evidence of why what we're training for here is very important," said Scott Dillon, who will start training in July to become a naval flight officer.

The midshipmen said discussions about the war had spilled

FACT FILE: Enrollment, Degrees, High-School Graduates, 1990-2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
College enrollment												
Total	13,558,000	13,643,000	13,613,000	13,597,000	13,579,000	13,657,000	13,747,000	13,906,000	14,089,000	14,165,000	14,326,000	14,447,000
Men	6,292,000	6,309,000	6,276,000	6,254,000	6,228,000	6,247,000	6,271,000	6,331,000	6,412,000	6,395,000	6,468,000	6,522,000
Women	7,266,000	7,334,000	7,337,000	7,343,000	7,351,000	7,410,000	7,476,000	7,575,000	7,677,000	7,770,000	7,858,000	7,925,000
Public	10,539,000	10,608,000	10,587,000	10,579,000	10,571,000	10,637,000	10,710,000	10,834,000	10,977,000	11,047,000	11,171,000	11,264,000
Private	3,019,000	3,035,000	3,026,000	3,018,000	3,008,000	3,020,000	3,037,000	3,072,000	3,112,000	3,118,000	3,155,000	3,183,000
Full-time	7,640,000	7,627,000	7,569,000	7,508,000	7,456,000	7,490,000	7,542,000	7,654,000	7,801,000	7,841,000	7,970,000	8,067,000
Part-time	5,918,000	6,016,000	6,044,000	6,089,000	6,123,000	6,167,000	6,205,000	6,252,000	[illegible]	6,324,000	6,356,000	6,380,000
Full-time-equivalent *	9,788,000	9,801,000	9,753,000	9,708,000	9,668,000	9,718,000	9,784,000	9,913,000	10,072,000	10,125,000	10,265,000	10,371,000
Four-year institutions												
Total	8,548,000	8,599,000	8,572,000	8,540,000	8,507,000	8,542,000	8,588,000	8,685,000	8,803,000	8,837,000	8,945,000	9,026,000
Public	5,792,000	5,826,000	5,806,000	5,783,000	5,760,000	5,785,000	5,816,000	5,883,000	5,965,000	5,994,000	6,070,000	6,126,000
Private	2,756,000	2,773,000	2,766,000	2,757,000	2,747,000	2,757,000	2,772,000	2,802,000	2,838,000	2,843,000	2,875,000	2,900,000
Two-year institutions												
Total	5,010,000	5,044,000	5,041,000	5,057,000	5,072,000	5,115,000	5,159,000	5,221,000	5,286,000	5,328,000	5,381,000	5,421,000
Public	4,747,000	4,782,000	4,781,000	4,796,000	4,811,000	4,852,000	4,894,000	4,951,000	5,012,000	5,053,000	5,101,000	5,138,000
Private	263,000	262,000	260,000	261,000	261,000	263,000	265,000	270,000	274,000	275,000	280,000	283,000
Undergraduate	11,651,000	11,706,000	11,661,000	11,625,000	11,598,000	11,668,000	11,753,000	11,903,000	12,084,000	12,208,000	12,365,000	12,487,000
Graduate	1,617,000	1,644,000	1,657,000	1,674,000	1,684,000	1,691,000	1,696,000	1,704,000	1,706,000	1,675,000	1,679,000	1,678,000
Professional	290,000	293,000	295,000	298,000	297,000	298,000	298,000	299,000	299,000	282,000	282,000	282,000
Degrees												
Associate	458,000	463,000	465,000	461,000	[illegible]	458,000	459,000	463,000	469,000	477,000	482,000	489,000
Bachelor's	[illegible]	[illegible]	1,080,000	1,063,000	1,058,000	1,047,000	1,031,000	1,015,000	1,012,000	1,010,000	1,019,000	1,037,000
Master's	319,000	[illegible]	322,000	323,000	323,000	324,000	324,000	324,000	324,000	325,000	326,000	327,000
Doctorate	35,600	35,900	35,900	36,100	36,200	36,300	36,400	36,400	36,400	36,400	36,300	36,200
First-professional	74,100	74,600	[illegible]	76,800	77,900	77,300	77,300	77,300	77,800	77,800	71,300	71,300
High-school graduates												
Total	2,628,000	2,522,000	2,517,000	2,518,000	2,512,000	2,631,000	2,670,000	2,770,000	2,879,000	2,923,000	2,966,000	3,237,000
Public	2,326,000	2,232,000	2,228,000	2,229,000	2,223,000	2,329,000	2,363,000	2,452,000	2,548,000	2,587,000	2,625,000	2,865,000
Private	302,000	290,000	289,000	289,000	[illegible]	302,000	307,000	318,000	331,000	336,000	341,000	372,000

* Estimate based on full-time enrollment plus the full-time equivalent of part-time enrollment as reported by institutions

Source: U.S. Department of Education

C2175-1 A

THE CHRONICLE
of Higher Education.

ISSN 0009-5982

February 20, 1991 • $2.75
Volume XXXVII, Number 23

News Summary

A special pull-out section, EVENTS IN ACADEME, SPRING-SUMMER 1991 follows Page A26

Articles on inside pages

Competition over "cold fusion" has moved to a different arena—the publishing house: Page A5.

A dispute over the revision of a writing course at the U. of Texas at Austin has attracted the attention of higher-education groups: Page A15.

The Agriculture Department released new rules on the care of animals used in research: Page A25.

Shrinking budgets are leading states to slow spending for grants to students, a survey shows: Page A28.

Iowa State U. says it holds the patent on a part of fax machines and is demanding royalties: Page A37.

Once on the brink of bankruptcy, a Catholic college has adapted to survive in inner-city Detroit: Page A41.

Sports officials are bracing for rigorous external examination as demands mount for the accountability of college programs: Page A43.

A blueprint for Chinese education in the 1990's stresses schooling over higher education: Page A45.

SECTION 1	Pages A1-52
Athletics	A43-44
Books	A12, 18
Business & Philanthropy	A37-39
Computers	A23
Deaths	A50
Fact Files	A28, 42
Gazette	A49
Government & Politics	A25-36
Grants	A38
International	A45-48
Personal & Professional	A15-23
Scholarship	A5-13
Students	A41-42
SECTION 2	**Follows Page C16**
Bulletin Board	B4-67
End Paper	B68
Opinion & Letters	B1-3
SECTION 3	**Follows Page A26**
Athletics Meetings	C27
Coming Events	C8
Deadlines	C28

Colleges Attack Plan to Deny Aid to Those at Bottom of Classes

Students and administrators call Bush's idea unfair, unworkable

By SCOTT JASCHIK

Many student leaders and college financial-aid officers say President Bush's proposal to deny federal grants and loans to students in the bottom 10 per cent of their college classes is unfair and unworkable.

If the proposal is enacted, critics say, it could discourage some students from taking tough courses and force others to drop out—including many good students.

The President made the proposal this month in his budget plan for the 1992 fiscal year. He also proposed that Pell Grant recipients who are in the top 10 per cent of their high-school classes or top 20 per cent of their college classes receive additional grants of $500.

Under current law, students need only be in good academic standing to qualify for federal aid.

'Greater Accountability'

William D. Hansen, Acting Deputy Under Secretary of Education for planning, budget, and evaluation, says the proposal will promote "greater accountability among students."

Mr. Hansen says he does not believe good students will be hurt by the plan. He says the government is trying to focus limited federal funds on "those who are able to prove academic success."

But Bo Duncan, vice-president of the Interfraternity Council at Auburn University, says students whose academic preparation hasn't been adequate may need a few years to catch up with their classmates. They may be at the bottom of their classes and yet be working very hard, he says.

"We all know that many of the people who need these funds aren't on the same

Continued on Page A32

'DEFINING MOMENT' IN THE MIDDLE EAST?

Scholars Question Idea That Gulf War Could Determine a 'New World Order'

By ELLEN K. COUGHLIN

As his ultimate rhetorical justification for the war in the Persian Gulf, President Bush has claimed that nothing less than a "new world order" is at stake.

Scholars are doubtful.

While there surely is a new post–cold-war system in the making, they say, the idea that the Gulf conflict can determine what it will look like is a dubious proposition. It is hard enough, scholars add, to anticipate how the war might effect a new regional order in the Middle East.

For his purposes, President Bush has kept his conception of a new world order vague, but it carries two unmistakable messages.

One is that a victory over Saddam Hussein will usher in an era of peace and stability—a "kinder, gentler" world in which the United States and its allies, acting through the United Nations, will see that order is maintained.

Most scholars who study geopolitical systems and international relations agree that's not the way the world is moving.

"Whatever happens in the next three months," says Immanuel Wallerstein, professor of sociology at the State University of New York at Binghamton, "there will be nothing that looks remotely like an orderly, peaceful, quiet world."

An Oddly Stabilizing Effect

The end of the cold war as we knew it, scholars say, does not mean the beginning of peace.

For all its dangers, the superpower face-off had an oddly stabilizing effect on the world; in its absence, power has become dispersed among smaller nations, and regional conflict is increasingly likely—all of which appears to be borne out by the crisis in the Persian Gulf.

Mr. Wallerstein, a leading proponent of world-systems theory, which holds

Continued on Page A6

Presidents at Private Research Universities Earn From $105,000 to $300,000, Tax Forms Reveal

By JULIE L. NICKLIN

Chief executive officers at 25 leading private research institutions received compensation in 1988-89 ranging from $105,000 at Washington University to $300,000 at Vanderbilt.

Most of the presidents earned more than their counterparts at public institutions, but far less than executives in the business world. Many also earned substantially less than medical professors at their own institutions.

The top earner at the 25 institutions was a professor of surgery at Cornell University, whose compensation—including clinical fees paid by patients—was $1.4-million.

The information was obtained by *The Chronicle* from documents that tax-exempt institutions must file each year with the Internal Revenue Service. Compensation figures for most chief executive officers and some professors did not include fringe benefits, perquisites, or deferred income. Compensation data for many medical professors, however, included a salary paid by the university and clinical fees charged to patients.

The 25 institutions surveyed were classified as Research I universities by the Carnegie Foundation for the Advancement of Teaching. Such institutions offer advanced degrees and receive at least $33.5-million in federal support for research and development.

Congress passed the Omnibus Budget Reconciliation Act of 1987 that included a requirement that tax-exempt institutions, for the first time, must make their tax forms available for inspection on their campuses. The documents previously could be obtained from regional offices of

Continued on Page A16

The compensation of presidents and the five highest-paid employees at major private research universities: Page A17.

Peru's Universities in Crisis, Caught in the Crossfire Between Rebel Groups and the Country's Leaders

By ROBIN KIRK

LIMA, PERU

A series of killings, disappearances, and arrests has traumatized Peruvian higher education in recent months.

The incidents, part of a pattern of violence that has plagued Peru for years, reflect a growing mistrust between academic people and the country's political and military leaders, university sources say.

The universities have been the scene of both guerrilla-generated violence and government-ordered security sweeps, forcing campus officials to concern themselves almost constantly with the physical safety of employees and students.

Although the precise number of victims is not known, the Peruvian Senate estimates that 1,500 people were killed in political violence in the first five months of President Alberto Fujimori's tenure, which began last July 28.

In addition, the National Human Rights Coordinating Committee, a coalition of independent organizations, has reported to the United Nations that 82 people, including 14 professors and students, were killed for political reasons in 1990 by Peruvian armed forces. The group also recorded 246 detentions and disappearances in 1990, including 38 students and professors.

Academic sources say the country's leaders have been acting in the mistaken belief that the universities are training anti-government guerrillas. The university sys-

Continued on Page A45

MARGINALIA

"WET PAINT" sign in the administration building at Valparaiso University:

"An oleaginous resin coating has recently been applied to nearby surfaces and is still in an incomplete state of oxidation.

"Contact with aforementioned surfaces will cause pigment transference to skin or clothing, compromise the decorative integrity of the coating and invoke ire."

■

Sports story in *Sun Star,* the student weekly at the University of Alaska Fairbanks:

"UAF hockey player Shawn Ulrich scored the game-winning goal and goalie Jamie Loewen put on an incredible performance in the net to lead the Nanooks to a 4-3 win over the University of Alaska Anchorage Saturday night in front of 3000 spectators.

"The UAA Seawolves won the first game of the series 6-4 Friday night in Anchorage."

The story's headline:

UAF SMASHES UAA TWICE

That's partisanship for you!

■

News item in *The State News,* the newspaper at Michigan State University:

"The Academy of Motion Picture Arts and Sciences is now accepting entries for the Student Academy Awards.

"Like the Oscars, the winners will be selected by Academy members. National winners will be competing for gold, silver and bronze awards of $2,000, $1,500, and $1,000 in animation, documentary, dramatic and experimental categories. . . .

"Regional winners' films will be sent to the teacher held hostage in Beirut, Lebanon and his wife awaiting his release in their Washington D.C. home."

They'll appreciate the thought.

■

From the Lycoming College student newspaper, *The Lycourier:*

The Lycoming chapter of Kappa Delta Rho has been cleared of the charges brought against it last semester by its national organization. . . .

" 'I pretty much thought the verdict couldn't be any different,' said senior Eric Zerbe. 'Everything was heresy.' "

So many things are, these days.

■

Note in *Dollars for Scholars: Barron's Complete College Financing Guide:*

"Women can expect to earn less than their male colleagues in some job positions. Be careful when borrowing because you will have less money to repay your student loans than your male fiends who have borrowed."

Demonic, if you ask *us*. —C.G.

In Brief

U.S. Lead in Biomedicine Said to Be in Jeopardy

WASHINGTON—A majority of academic science administrators believe that the United States might lose its world leadership in biomedical research, a survey by the Gallup Organization has found.

In the survey, Gallup staff members contacted 202 academic-research leaders, 107 executives of drug companies and other corporations that perform biomedical research, and 104 scientists who hold N.I.H. grants. The survey was commissioned by the Pharmaceutical Manufacturers Association Foundation and released here last week.

Of the academics surveyed, 55 per cent said they believed there was a "serious risk" that the United States would lose its leadership, while 39 per cent believed a "moderate risk" existed. Corporate executives surveyed said the most serious threat to American research leadership came from Japan.

Among the signs of weakness cited by those surveyed were a decline in the number of students entering biomedical research and a drop in the quality of graduate students.

More than twice as many academic-research leaders believed the quality of American graduate students had gone down as believed that graduate-student quality had gone up.

Student Borrowers' Debts Not Seen as Onerous

WASHINGTON—Although student borrowing is on the rise, most college graduates are not overburdened by education debts, the U.S. Department of Education said last week.

In an analysis of surveys of 1977 and 1986 graduates of four-year institutions, the department found that half of the 1986 graduates had education debts, compared with one-third of the 1977 graduates. The median owed in the 1986 group was $4,800, compared with $2,000 for the earlier group. The increase was 33 per cent when adjusted for inflation, the report said.

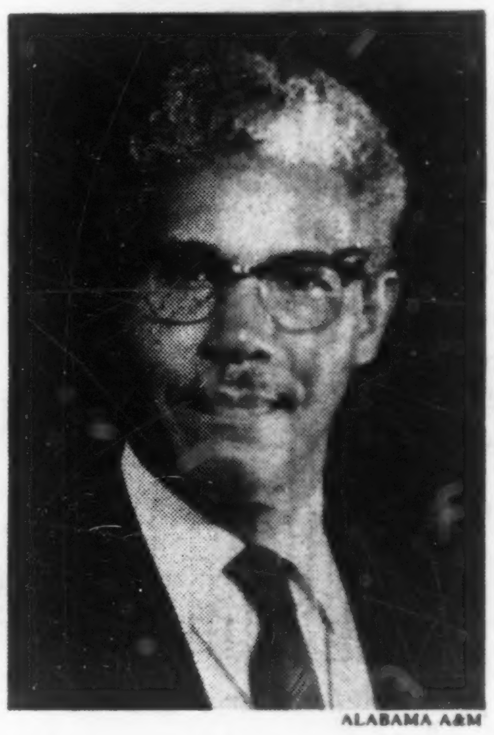
However, the share of income going to education-loan payments dropped over the period, according to the department. Education debt amounted to a median of 4 per cent of gross income for 1986 graduates, while 1977 graduates had a median debt burden of 5.2 per cent.

Among 1986 graduates, 6.5 per cent had a median debt burden greater than 10 per cent, which the report said is generally considered excessive. The median debt burden of 1986 graduates of public institutions was 3.4 per cent; for graduates of private colleges, the level was 5.1 per cent.

The surveys covered only bachelor's-degree recipients in their first year after graduation. They excluded those who enrolled in graduate school immediately after college and those who dropped out of college.

Alabama A&M President Resigns Under Pressure

HUNTSVILLE, ALA.—Alabama A&M University President Carl Marbury has resigned after a controversial three-year tenure.


ALABAMA A&M

Mr. Marbury (*below*), who was named to the post in 1989 after serving two years as interim president, stepped down following a closed meeting of the Board of Trustees that was chaired by Gov. Guy Hunt. A university official, who asked not to be identified, said Governor Hunt had asked for the resignation, which was effective immediately. The board unanimously approved the appointment of Alan Lee Keyes as interim president. Mr. Marbury could not be reached for comment.

Mr. Marbury's administration had been clouded by allegations that he had given jobs for sex, fired employees arbitrarily, and bribed legislators.

In 1989, Mr. Marbury came under fire for allegedly paying $500 each to two state legislators who were working on a bill supported by the university. The charges were investigated by the Alabama Ethics Commission, but a grand jury declined to indict him.

U. of Ill. Immunizes 5,700 After 2 Meningitis Deaths

CHAMPAIGN, ILL.—Two students at the University of Illinois at Urbana-Champaign died this month of a blood infection related to meningitis.

Since the deaths, at least 5,700 students and faculty and staff members on the campus have been given an oral antibiotic to ward off infection. No new cases have been reported.

Gregory A. Mank died on February 9 after checking into a local hospital. Brian McDonnell died two days later. No direct connection has been found between the two students.

Both had meningococcemia, an invasion of the blood stream by the same form of bacteria that causes meningitis, which strikes the protective membranes surrounding the brain and spinal cord. Early signs of the contagious infection resemble the flu. Treatment of the illness at an early stage is usually successful.

Temple, Faculty Union Reach Final Agreement

PHILADELPHIA — More than four months after the end of a bitter 29-day faculty strike at Temple University, the administration and the professors' union have approved a new contract.

The agreement will mean an average raise of 34 per cent in professors' base salaries over a four-year period, said a union spokesman. It includes across-the-board raises, merit raises, and adjustments for senior faculty and staff members. It also requires professors to pay part of their health-insurance premium, which the university had paid in full.

One highly volatile issue—make-up pay for the professors who were on strike—was dropped from the bargaining table. The two sides agreed to leave the decision of how much to pay the professors to the Pennsylvania Labor Relations Board.

Professors called for a walkout last fall after the faculty union rejected the university's offer of a 4-per-cent, across-the-board raise with an additional 1 per cent per year over the next two years to be awarded as merit increases.

A judge ordered the professors back to work in the face of the university's threats to cancel the entire semester.

Tarkio Needs $3-Million to Stay Open Past March

TARKIO, MO.—Tarkio College has announced it will close this spring unless it can raise $3-million in cash or pledges by the end of March.

William E. Walker, the college's president, said its finances had been seriously eroded. He announced an urgent appeal for public support.

Besides raising $3-million, Mr. Walker said the college must take three other steps to stay open.

Tarkio is seeking to renegotiate a debt of $9.3-million it owes the Education Department for mismanaging student-loan programs under the previous college administration. A second step involves

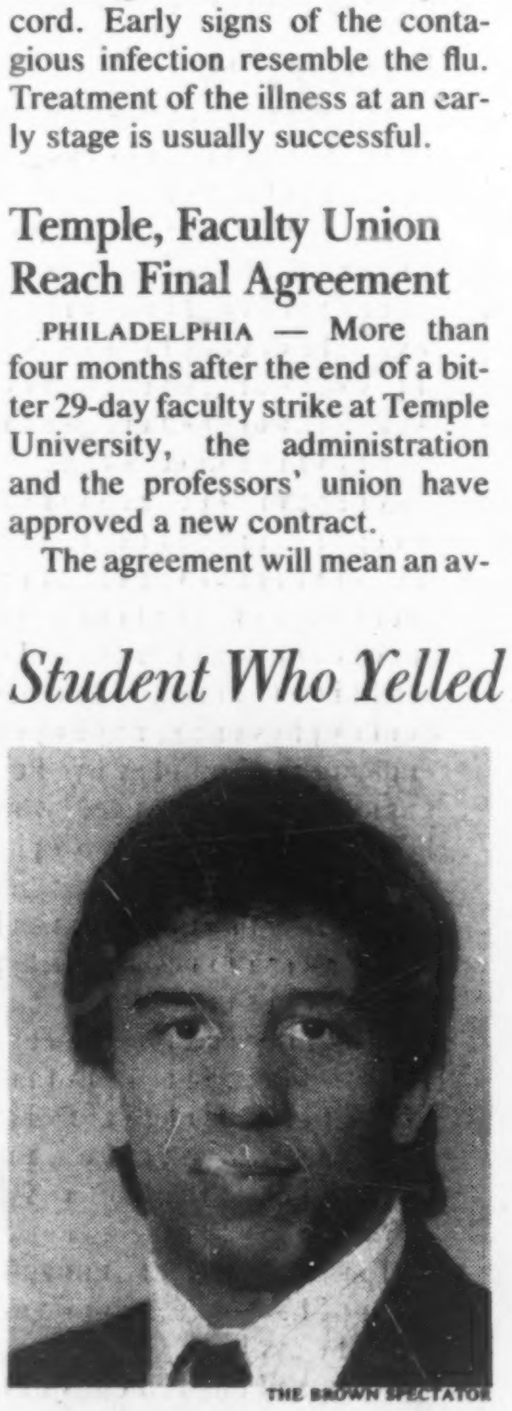
Brown U. Expels Student Who Yelled Racial Epithets

PROVIDENCE, R.I.

Brown University has expelled a student for violating its anti-harassment policy. The expulsion is believed to be the first to be carried out on campuses enforcing such policies—many of which have come under attack as unconstitutional.

Vartan Gregorian, Brown's president, upheld an October decision by the University Disciplinary Council to expel Douglas Hann (*right*), a junior, for yelling anti-black, anti-Semitic, and anti-homosexual remarks, according to *The Brown Daily Herald,* the student newspaper. The university would not confirm the student's identity.

It was Mr. Hann's second violation involving racial epithets. His expulsion also reportedly resulted from violations of policies against alcohol abuse and disruptive behavior.


THE BROWN SPECTATOR

According to *The Herald,* Mr. Hann, who was celebrating his 21st birthday in October, was yelling anti-black statements—apparently at no one in particular—in a courtyard between dormitories. When a student yelled at him, Mr. Hann shouted epithets back and at other students.

The council ruled that Mr. Hann's actions violated Brown's policy that prohibits the "subjection of another person, group, or class of persons, to inappropriate, abusive, threatening, or demeaning actions, based on race, religion, gender, handicap, ethnicity, national origin, or sexual orientation."

Steven Brown, executive director of the Rhode Island affiliate of the American Civil Liberties Union, said the university had acted inappropriately in punishing a student "on the basis of comments he has made, no matter how offensive or repugnant."

Anti-harassment policies have come under attack at public universities, which are bound by the Constitution to protect freedom of speech. In 1989, a federal court rejected a University of Michigan policy that has since been revised. A suit is pending against the University of Wisconsin System.

In a statement, President Gregorian said neither his actions nor Brown's code of conduct "should be construed as limiting anyone's freedom of speech."

Mr. Hann could not be reached for comment. —JULIE L. NICKLIN

The Chronicle of Higher Education (ISSN 0009-5982) is published weekly except the third week in August and the last two weeks in December, at 1255 Twenty-Third Street, N.W., Washington, D.C. 20037. Subscription rate: $62.50 per year. Second-class postage paid at Washington, D.C., and at additional mailing offices. **Copyright © 1991 by The Chronicle of Higher Education, Inc.** **Printed in the United States of America. POSTMASTER: Send address changes to The Chronicle of Higher Education, P.O. Box 1955, Marion, Ohio 43305. Member, Audit Bureau of Circulations. The Chronicle reserves the right not to accept an advertiser's order. Only publication of an advertisement shall constitute final acceptance of the advertiser's order.**

1988-89 Compensation of Chief Executives and Top Earners at 25 Private Universities

The list below shows the compensation of chief executives in 1988-89 at 25 private universities, as well as those of the five highest-paid employees who are not officers, directors, or trustees of their institutions.

The institutions are classified as "Research I" universities by the Carnegie Foundation for the Advancement of Teaching, which groups colleges and universities in 10 categories according to several criteria. In 1987, the foundation classified 45 public and 25 private institutions as Research I universities because they offered advanced-degree programs, gave a high priority to research, and received at least $33.5-million in federal support for research and development.

Most compensation figures were obtained from federal tax forms that private, tax-exempt colleges and universities must file annually with the Internal Revenue Service.

Generally, income reported for the five highest-paid employees includes only the amount they earned for performing teaching or administrative services. In some cases, the compensation that medical-school faculty members received from clinical practice at the university hospital was included as part of their overall earnings. Most institutions, however, did not provide a breakdown of the compensation.

In addition, some compensation figures may include one-time, severance, retirement, or other payments, while other figures may reflect earnings for only a portion of the year. Most institutions did not make such distinctions in the reporting process.

The figures do not reflect any non-taxable earnings, such as university contributions to deferred-income plans, employee-benefit plans, expense accounts, or other allowances.

BOSTON UNIVERSITY

Chief executive:
John R. Silber, $275,000

Five highest-paid employees:
Edward L. Spatz, chairman, School of Medicine's surgery division; chief, University Hospital's surgery division: $231,420
Richard H. Egdahl, academic vice-president for health affairs: $195,000
John I. Sandson, dean emeritus, School of Medicine: $185,000
Aram V. Chobanian, dean, School of Medicine: $183,333
Norman G. Levinsky, chairman, division of medicine, School of Medicine: $175,500

CALIFORNIA INSTITUTE OF TECHNOLOGY

Chief executive:
Thomas E. Everhart, $200,000

Five highest paid employees:
Richard M. Dickinson, member of Jet Propulsion Laboratory technical staff, Institute of Space and Astronautical Sciences, Japan: $187,170
Rochus E. Vogt, professor of physics: $168,900
Gael F. Squibb, senior member of J.P.L. technical staff, European Space Agency, the Netherlands: $144,312
Robert E. Edelson, program studies director, Space Station Support Office, Reston, Va.: $139,981
Gerald J. Wasserburg, professor of geology and geophysics: $124,000

CARNEGIE MELLON UNIVERSITY

Chief executive:
Richard M. Cyert, $130,600

Five highest-paid employees:
Yuji Ijiri, professor of accounting and economics: $160,589
Allen Newell, professor of computer science: $151,333
Larry E. Druffel, director of Software Engineering Institute: $147,200
Stephen W. Director, head of electrical and computing engineering: $144,938
Raj D. Reddy, director of Robotics Institute: $140,833

CASE WESTERN RESERVE UNIVERSITY

Chief executive:
Agnar Pytte, $185,000

Five highest-paid employees:
Avroy Fanaroff, professor of pediatrics: $224,161
Adel A. Mahmoud, professor of medicine; director, Center for International Health: $189,000
Richard Martin, associate professor of pediatrics: $185,234
Richard E. Behrman, vice-president for medical affairs; dean, School of Medicine: $180,000
William Speck, chairman, department of pediatrics: $175,500

COLUMBIA UNIVERSITY

Chief executive:
Michael I. Sovern, $297,000

Five highest-paid employees:
Frederick Alan Rapoport, assistant professor of clinical medicine: $1,110,353
Eric Allen Rose, assistant professor of surgery: $888,435
Frank E. Gump, professor of surgery: $597,725
George Joseph Todd, assistant professor of clinical medicine: $545,285
Craig R. Smith, assistant professor of surgery: $457,213

CORNELL UNIVERSITY

Chief executive:
Frank H. T. Rhodes, $112,690

Five highest-paid employees:
Wayne Isom, professor of surgery: $1,425,461
Karl Kreiger, associate professor of surgery: $1,154,695
Jeffrey Gold, assistant professor of surgery: $663,450
Stanley Chang, assistant professor of surgery: $541,751
Michael Lavyne, associate professor of clinical surgery: $524,250

DUKE UNIVERSITY

Chief executive:
H. Keith H. Brodie, $214,456

Five highest-paid employees:
Peter Van Trigt, III, assistant professor of surgery: $164,300
David C. Sabiston, Jr., chairman, department of surgery: $164,100
Dani P. Bolognesi, professor of surgery: $154,550
Robert B. Jennings, chairman, department of pathology: $151,700
Bernard J. Carroll, chairman, department of psychiatry: $148,400

HARVARD UNIVERSITY

Chief executive:
Derek C. Bok, $148,383

Five highest-paid employees:
Daniel C. Tosteson, dean of the Faculty of Medicine: $178,500
John R. Brooks, professor of surgery: $157,618
Sholem Postel, assistant clinical professor of medicine: $150,792
John McArthur, dean, Business School: $149,000
James Vorenberg, dean, Law School: $147,000

HOWARD UNIVERSITY

Chief executive:
James E. Cheek, $182,582

Five highest-paid employees:
Harold R. Washington, professor of law: $419,268 [1]
James W. Robertson, professor of law: $171,174
James S. Teal, chairman, department of radiology: $151,781
Alfred L. Goldson, chairman, department of radiotherapy: $151,285
LaSalle D. Leffall, chairman, department of surgery: $143,369

JOHNS HOPKINS UNIVERSITY

Chief executive:
Steven Muller, $225,469

Five highest-paid employees:
Ronald G. Michels, professor of ophthalmology: $481,135
Donlin M. Long, chairman, department of neurosurgery: $287,649
Bruce A. Reitz, professor of cardiac surgery: $287,169
A. Edward Maumenee, professor of ophthalmology: $281,250
Patrick C. Walsh, director, department of urology: $272,675

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Chief executive:
Paul E. Gray, $226,000

Five highest-paid employees:
Walter E. Morrow, laboratory director and professor of electrical engineering and computer science: $179,250
Gerald L. Wilson, dean, School of Engineering: $157,500
Jonathan Allen, laboratory director and professor of electrical engineering and computer science: $149,000
Donald C. MacLellan, assistant laboratory director: $141,500
Arnold N. Weinberg, medical director and head of the medical department: $141,500

NEW YORK UNIVERSITY

Chief executive:
John Brademas, $250,431

Five highest-paid employees:
Irwin Freedberg, chairman, department of dermatology: $238,101
Rodolfo Llinas, chairman, department of physiology: $192,872
Joseph Dancis, chairman, department of pediatrics: $171,630
Charles Hollander, professor of endocrinology: $168,640
Vittorio Defendi, chairman, department of oncology: $161,144

NORTHWESTERN UNIVERSITY

Chief executive:
Arnold R. Weber, $198,500

Five highest paid employees:
David L. Nahrwold, chairman, department of surgery: $193,126
Artur Raviv, professor of finance: $186,166
Peter J. Robinson, chairman, department of dental periodontics: $182,889
Robert D. Dewar, associate professor of organization behavior: $179,233
Harry N. Beaty, dean, medical school: $172,665

PRINCETON UNIVERSITY

Chief executive:
Harold T. Shapiro, $188,917

Five highest-paid employees:
Hisashi Kobayashi, dean, School of Engineering and Applied Science: $151,890
Aaron Lemonick, dean of the faculty: $136,000
Harold P. Furth, director, Plasma Physics Laboratory, and professor of astrophysics: $132,000
Arnold J. Levine, chairman, department of molecular biology, and professor of molecular biology: $130,717
Charles Fefferman, professor of mathematics: $128,334

ROCKEFELLER UNIVERSITY [2]

Chief executive:
Joshua Lederberg, $168,000

Five highest-paid employees:
Torsten N. Weisel, professor of neurobiology: $138,600
James E. Darnell, Jr., professor of molecular cell biology: $131,250
Gerald M. Edelman, professor of developmental and molecular biology: $131,250
Robert G. Roeder, professor of biochemistry and molecular biology: $131,250
Paul Greengard, professor of molecular and cellular neuroscience: $131,000

STANFORD UNIVERSITY

Chief executive:
Donald Kennedy, $194,375

Five highest-paid employees:
Norman E. Shumway, professor of cardiovascular surgery: $460,221
Edward B. Stinson, professor of cardiovascular surgery: $369,732
Phillip E. Oyer, professor of cardiovascular surgery: $351,075
D. Craig Miller, professor of cardiovascular surgery: $305,147
John Hanberry, professor of neurosurgery: $282,991

UNIVERSITY OF CHICAGO

Chief executive:
Hanna H. Gray, $222,500

Five highest-paid employees:
Robert B. Karp, chief of cardiac surgery: $420,000
John F. Mullan, chairman, department of neurosurgery: $379,000
Thomas J. Krizek, chairman, department of surgery: $365,000
Frank P. Stuart, professor of surgery: $334,000
William R. Panje, chairman, department of otolaryngology: $330,000

UNIVERSITY OF MIAMI

Chief executive:
Edward T. Foote, $210,000

Five highest-paid employees:
Hubert L. Rosomoff, professor of neurological surgery: $292,138
N. B. Craythorne, chairman, department of anesthesiology: $251,448
Larry K. Page, professor of neurological surgery: $249,894
Mark D. Brown, chairman, department of orthopedics and rehabilitation: $235,651
Frank J. Eismont, associate professor of orthopedics and rehabilitation: $235,651

UNIVERSITY OF PENNSYLVANIA

Chief executive:
F. Sheldon Hackney, $250,000

Five highest-paid employees:
Alan J. Wein, professor of urology: $770,000
Eugene S. Flamm, professor of neurosurgery: $585,000
William Potsic, associate professor of surgery: $571,945
William Norwood, professor of surgery: $565,543
Leslie Sutton, associate professor of neurosurgery: $526,900

UNIVERSITY OF ROCHESTER

Chief executive:
G. Dennis O'Brien, $200,000

Five highest-paid employees:
Robert E. O'Mara, professor of radiology: $263,030
James R. Woods, associate professor of obstetrics and gynecology: $248,591
Ronald A. Gabel, professor of anesthesiology: $204,000
James Cerilli, professor of surgery: $189,727
Philip Rubin, professor of radiation oncology: $182,727

UNIVERSITY OF SOUTHERN CALIFORNIA

Chief executive:
James H. Zumberge, $215,000

Five highest-paid employees:
Robert L. Baehner, chairman, department of pediatrics: $223,758
Stephen J. Ryan, Jr., chairman, department of ophthalmology: $212,027
Jack R. Borsting, dean, department of business administration: $209,335
Richard L. Tannen, chairman, department of medicine: $203,064
Franco M. Muggia, professor of medicine: $201,290

VANDERBILT UNIVERSITY

Chief executive:
Joe B. Wyatt, $300,000

Five highest-paid employees:
Harvey W. Bender, professor of thoracic and cardiac surgery: $437,157
R. Bruce Shack, associate professor of plastic surgery: $410,342
Kevin F. Hagan, assistant professor of plastic surgery: $357,325
John W. Hammon, associate professor of thoracic and cardiac surgery: $353,930
Walter H. Merrill, associate professor of thoracic and cardiac surgery: $342,453

WASHINGTON UNIVERSITY

Chief executive:
William H. Danforth, $105,000

Five highest-paid employees:
James L. Cox, professor of cardiothoracic surgery: $480,000
Gregorio A. Sicard, professor of surgery: $385,336
Charles B. Anderson, professor of surgery: $366,458
Thomas L. Spray, associate professor of cardiothoracic surgery: $365,481
Henry J. Kaplan, head, department of ophthalmology: $302,100

YALE UNIVERSITY

Chief executive:
Benno C. Schmidt, Jr., $187,500

Five highest-paid employees:
Gary Kopf, associate professor of cardiothoracic surgery: $333,892
John A. Elefteriades, associate professor of surgery: $303,429
John C. Baldwin, professor of cardiothoracic surgery: $274,347
William F. Collins, Jr., professor of neurological surgery, and acting chairman, department of surgery, $232,560
Joseph Warshaw, chairman, department of pediatrics: $232,546

YESHIVA UNIVERSITY

Chief executive:
Norman Lamm: Compensation not disclosed

Five highest-paid employees:
Irwin R. Merkatz, chairman, department of obstetrics and gynecology: $250,507
Dominick Purpura, dean, Albert Einstein College of Medicine: $227,400
David Zysman, vice-president for development: $203,068
Herman van Praag, chairman, department of psychiatry: $183,975
Herbert Schaumburg, chairman, department of neurology: $175,778

Compiled by Julie L. Nicklin, Jennifer Wong, and other Chronicle staff members

---

[1] Figure includes a severance package.

[2] Rockefeller University, which is primarily a research institute, is classified as a Research I university even though it does not meet all the criteria for that category.